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## SPEECH AND PERSONALITY

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Language, traditionally, has been regarded as the "vehicle of thought," with the thought attracting far more attention than the vehicle. But there are those who object to the traditional distribution of attention on the ground that the vehicle as well as the freight it carries should be given systematic scrutiny. We will pave the way for a nomothetic science of language, they insist, only when we stop worrying exclusively about the thoughts expressed and lay hold on the linguistic reactions themselves.

The psychologist whose curiosity is chronically skewed toward problems in personality finds considerable promise in this new "objective-descriptive" approach to language. He senses that precise linguistic data may lead not only to the formulation of general linguistic laws but also to a greater understanding of the individual who uses language. Reacting in line with his persistent bias, he asks whether there are not individual differences in verbal behavior and whether such individual differences are not related to personal adjustment.

The present paper is concerned with the existence, consistency, and significance of individual differences in the mode of verbal expression. Its purpose is to review the relevant researches, to assay the fruitfulness of the general area of investigation, and to point out some pressing problems.

### BACKGROUNDS

Before 1900, although they granted the importance of language, psychologists had little to say about linguistic phenomena. For a long time language was described as the "expression of ideas." Nothing more, according to the prevailing frame of reference, needed to be said. Nothing more *was* said until psychology escaped the long-lived incubus of dualism and subjectivism. Not until the advent of functionalism and, later, of behaviorism were

problems in language given a psychological formulation. The "functional-behavioral" view of language first appeared in the writings of Baldwin (7) and Cooley (27). Dewey (29), Mead (63, 64), and Bernard (13) enlarged upon the basic conception, while a more psychological flavor has been added by Allport (2), Lorimer (58), Markey (60), DeLaguna (28), and Latif (55). Language became behavior. It achieved status as the consummately human behavior of human beings. As such it became amenable to experimental investigation.

When psychologists came to view language in its behavioral and adjustmental context, they became more conscious of linguistic problems. In recent years, this consciousness has been sharpened through an increased *self*-consciousness in the use of language. The writings of Carnap (22), Bridgman (18), Bloomfield (14), Morris (68), and Stevens (90), dealing with language as an organon of the sciences, and the works of Ogden and Richards (73), Korzybski (52), Johnson (47), and others, treating the more limited semantical aspect of language, have had a noticeable effect upon psychologists. More and more of them are more and more concerned with the problems of verbal behavior. The bibliographical reviews of Esper (36), Adams and Powers (1), McCarthy (61), and McGranahan (62) demonstrate that a psychology of language is under construction.

Though largely nonexperimental, there is an extensive and growing psychological literature treating linguistic phenomena. Most of this literature is beyond the scope of the present paper, but there are two perceptible developments, within the larger area, which serve as a background for the problem of language and personality. The first development treats the functional relation between language and nonlinguistic behavior. The second is directed toward a quantitative description of linguistic phenomena themselves.

In connection with the first development there have been several experiments and many theories suggesting that language is intimately involved in nearly all mental processes and adaptations.

Mead's (64) notion is that linguistic activity is prerequisite to self-consciousness and the development of the Ego. Luria (59) has accounted for "will," or the functional barrier between stimulus and overt response, largely in terms of the individual's use of language. Lehmann (56), Cassirer (25), and DeLaguna (28) have stressed the role of language in per-

ception. Warden (101) has demonstrated the important part that verbalization plays in the learning process; and Cason (24), Razran (79), and others have elaborated upon the role of language in human conditioning. Many writers have concerned themselves with the elusive relation between language and thought.

The second trend, that toward a quantitative analysis and description of linguistic events, is as yet making only a minor stir in the developing psychology of language. But there are several investigators who adhere to the conviction that we must have precise descriptions of the ways in which linguistic phenomena occur before we can have an adequate empirical psychology of language. We must escape the artificial classifications of the grammarians and devise methods of analysis which will make possible a *psychological* description of regularities, interconnections, and situational variations in linguistic phenomena.

Many of the studies in children's language, reviewed thoroughly by McCarthy (61) and in part by Young (105), contribute to this trend, but too often the light these researches might shed upon the psychology of language is obscured by a preoccupation with developmental norms. Zipf's (106) frequency-counts are a step toward a quantitative psychology of language, and Skinner (85, 86), Carroll (23), Chappell (26), and Boder (15) have given us indications that linguistic behavior is vulnerable to the quantitative attack. Johnson (48) has outlined a comprehensive program of research aimed at a quantitative science of language.

In short, the phenomena of human speech may some day be given a description and a classification rooted in the behavior of organisms rather than in the minds of armchair grammarians.

One modern emphasis is upon the functional significance of language in the life of the organism. Another trend of development shows that for the phenomena of language, at the descriptive level, a precise and analytical description is feasible. These two developments set the stage for the problem of speech and personality. The speech of the individual is involved in his daily adjustments, and the speech of the individual can be studied by methods straightforward and simple.

When Ben Jonson wrote, "Language most showeth a man; speak that I may see thee," he was epitomizing a notion more elaborately developed by Dewey (30), Sapir (83), Kantor (49), Elwood Murray (69), Pear (76), and others. All these writers stress the richness of the relation between speech and personality. Man, the sign-using animal, makes many of his adjustments by devices purely linguistic, and his intellectual functions are in large

part dependent upon words. If we set up the hypothesis that a study of the individual's verbal behavior will disclose a facet of his personality, it appears unlikely that we are weaving a rope entirely of sand.

The researches bearing upon this hypothesis will be treated below under the following headings: (1) Studies of Literary Style, (2) Types of Speech and Types of Thought, (3) The Language of the Child, (4) Semantics and the Individual, (5) Diagnostic Significance of Specific Linguistic Constructions: The Verb-Adjective Ratio, (6) Effective Speech and Effective Personality, (7) Speech in Psychopathology, (8) Voice and Personality, and (9) Disorders of Speech.

#### STUDIES OF LITERARY STYLE

The French have it that style is the man himself. There has been, however, little experimental work to implement this definition, either by the French or by others. Possibly this is due to the difficulty of defining style more precisely and to the conviction that style, however defined, is too subtle an aspect of behavior to submit to system and test.

Vernon (97), approaching at the level of impression the problem of written style, found that he could match, to a degree significantly greater than chance, the anonymous essays of his subjects with his impression of their personalities. These impressions he gained by observing the subjects for 45 minutes while they were occupied with various nonverbal tests.

Allport, Walker, and Lathers (3), "interested in the most highly generalized trait of an individual which seems to be expressed in his written production," found that anonymous themes of college students could be matched successfully with other themes from the same students. Working with nine themes from each of 70 students, collected over a period of eight months, the investigators attempted to group together all the themes written by each subject. The success of these matchings was computed by Vernon (97) in terms of a contingency coefficient of  $.60 \pm .062$ .

The investigators report that successful matchings could not be made on the basis of "mechanical carriers of style," but that it was necessary to make judgments concerning broad personal characteristics of the writer. They perceived "a certain common quality or characteristic which would transcend the particular topic and reveal the student." One student revealed tolerance and a sense of humor, another a pervasive self-consciousness, etc. The investigators maintain that the identifying characteristics of the themes are too elusive to be stated adequately in language. But in spite of this tendency to believe that style can be approached only through some manner of intuitive perception of its form-quality, the writ-



ers, in their reports of the actual process of judging themes, demonstrate that they did use such cues as simple, complex, involved, or loose sentences and details of organization and arrangement. Is it true, then, that style must be intuited? Or is there some chance for a more objective and statistical procedure?

Rickert (80) thinks that style can be studied in an analytical manner and proposes various techniques for such an approach. She analyzed the writings of various authors in terms of the "mechanical carriers" of style and found that such methods reveal marked stylistic differences among writers. She employed such categories as length, type, and distribution of sentences and the relative frequency of imagery, and found all of them diagnostic of individuality. However, Miss Rickert made no systematic study of consistency and made no attempt to connect style with the personality of the author. The interest centered around style *per se*. But the method may have possibilities for a thorough and psychological investigation of style.

Borchers (16), Barnard (9), and Runion (82) have made analyses of speech style employing methods similar to those suggested by Miss Rickert. Runion, whose studies may be taken as an example here, selected 50 speeches of Woodrow Wilson and made a quantitative study of sentence length, sentence structure, sentence "artistry" (loose, periodic, balanced), and figures of speech. The study proves the feasibility of a statistical approach to the study of individuality in expression, but the data have minimal significance for the psychological problem of style. The author, more than anything else, compared Wilson's technique to traditional rhetoric. With respect to all the variables employed, there was variation with the type of speech. For example, the mean sentence length in Wilson's after-dinner speeches was 34.16 while that for his sermons was 26.50 words—a statistically significant difference. And as we might expect, he uses more figures of speech in eulogistic and after-dinner speeches than in legislative addresses. These findings raise the interesting problem of situational determinants in linguistic behavior, but in themselves tell little about Wilson's style. There are few data which compare Wilson on one occasion with Wilson on another and none comparing Wilson with other speakers.

Further statistical studies of style have been carried out by Williams (104) and Wall (100). Williams evolved a measure of sentence length which he claims as a stable characteristic of an individual's literary style. Wall, by compiling the frequencies of such constructions as type of clause and passive voice in the German saga of *Wolfdietrich*, found that certain portions of the work demonstrated consistent syntactical traits of one author while other sections appeared to be written by an author with different traits. His findings agreed with existing notions concerning authorship of the saga.

The work of Vernon (97) and of Allport, Walker, and Lathers (3) has demonstrated that there is an individuality of written expression; that this individuality can be perceived by judges and matched successfully with impressions of the subjects; that various

samples of expression by the same individuals can be matched successfully with one another; and that judgments of style tend to be made on the basis of traits of the writer as they are revealed in the writing rather than on the basis of objective and mechanical cues. But Rickert (80), Runion (82), and others suggest that style can be studied and analyzed profitably in terms of various grammatical and lexical categories.

There is a controversy and a problem here. Can style be studied fruitfully in an objective, analytical and quantitative manner, or is there some inherent necessity for approaching it through intuitive judgment and high-order inference? Allport, Walker, and Lathers conclude that the most successful identifying marks are those general personality traits that show themselves in the writing of the individual. Undoubtedly these identifying marks are revealing. But the authors, having searched for no other marks, are not justified in concluding that these high-order traits are the *most* successful or the *only* successful identifying factors. Indeed, the judges demonstrate that they did rely on grammatical and lexical cues in arriving at their judgments. There appears little else to rely on. Uncomplicated sentence structure, for example, occurred in the themes of the person judged to be "direct and uncomplicated." Thus the "mechanical carriers" of style do enter into the judgments, but the judges do not study these cues systematically before making their inferences. Possibly a thorough statistical study of these cues will serve to fill out the lacunae in the inferential process, making it more retraceable, more precise, and more communicable.

There is, then, a reasonable argument, reinforced by some empirical evidence, that a quantitative analysis of written expression can discover individuality. It may well be, however, that there are subtle aspects of uniqueness in style which cannot be uncovered by analytical procedures. It is reasonable to expect that the sensitive observer can appreciate relationships and co-existences which escape objective analysis. The brain is a more subtle instrument than a calculating machine. We do not know how successfully the "down-to-earth" methods of analysis and computation can deal with style, but these methods cannot justifiably be discounted until they have been given a trial. This expected discrepancy between subjective impressions and objective data represents an important problem in connection with the study of many phases of personality. An attempt to "measure" style

might be expected to throw some light on this question. It would appear that language, because of its complexity and its apparent amenability to subtle quantification, recommends itself as a medium in which the analytical approach to individuality is likely to be most profitable.

#### TYPES OF SPEECH AND TYPES OF THOUGHT

Two German writers have suggestive things to say about speech and personality. Combining the familiar typological approach with what appears to be a typical Germanic sensitivity to linguistic problems, Krechel (53) gives us a characterological typology for speech, and Dieter (31), working with linguistic data, does the same for thought.

Krechel was interested in three major aspects of speech. These he designates as (1) *Spracherlebnis*, or the manner in which the individual understands or experiences words, (2) *Sprachgestaltung*, pertaining to the constructions and patterns employed in speech, and (3) *Sprechen*, the use of rhythm, intensity, and emphasis in the act of speaking. He collected samples of speech from a number of subjects, and, proceeding by what he describes as "eine verstehend-deskriptive und experimentelle Methode," he classified his subjects into three types, the *Egocentric*, the *Material*, and the *Selective*.

Each type of speaker, Krechel thinks, has a unified style, with all aspects of speech cohering in a personal pattern. The *Egocentric* speaker, for example, imposes idiosyncratic meanings upon words, chooses linguistic constructions more to express his *Ego* than to communicate with his auditor, and plays upon his voice as an instrument to impress himself upon all within earshot.

Krechel presents no data to support his typological delineations, and he fails to give much information about his method. Consequently his work leaves us somewhat unhappy. But if one steps into Krechel's shoes for the moment, backs away from questions of precise data and explicit procedure, and takes a global view of the issue, he will readily see that there are certain individuals who fall nicely into one of these types. There are also people who fall nicely into none of these types. Krechel makes keen observations of speech and people, and his categories may turn out to be basic dimensions of speech. Then again, his types may disintegrate completely in the face of empirical test. At any rate, the empirical test is called for.

Dieter's (31) work on types of thought shows a good deal of similarity to that of Krechel. Dieter maintains that each thought carries the stamp of the one who thinks it. He set out to investigate this stamp of individuality, since his is the faith that the ideational aspect of the person is of cardinal significance for the structure of personality.

Dieter collected and analyzed large numbers of school compositions and various samples of oral speech. On the basis of this material—or at

least with the aid of this material, for the typological investigator is not a slave to factual findings—Dieter defined two main types of thinkers.

The *Formalistic* type is anchored more in the abstract than in the concrete, is characterized by "distancing" and ordered procedure rather than egocentric and immediate. He is static and perseverative, repeating both form and content and demonstrating an inability to cover much territory in his thought. He imposes his will and logic upon phenomena, is addicted to causality, and his thought is possessed of continuity and closure.

The *Object-bound* type of thinker Dieter describes as being anchored in concrete life and as being egocentric or immediate where the *Formalistic* type is "distancing." He is associative rather than schematic, dynamic rather than static, and varied rather than perseverative.

Dieter presents quantitative data which indicate marked individual differences with respect to such dimensions of thought as repetitiveness or perseveration, "strictness" of organization, and the relative emphasis on causal, means-end, or motive-action relationships. But he gives no indication of the individual consistency here. This appears to be implicitly assumed. In several cases his typological lines do not follow the dictates of his data and hence have the appearance of arbitrariness. Despite these criticisms, however, this investigation is stimulating. The work strongly indicates that there are individual differences in this little-explored ideational realm and that these individual differences can be gotten at analytically.

Despite the fact that Dieter speaks of thought and Krechel speaks of speech, one is given to wonder if they are not working in essentially the same realm. They both observe linguistic behavior, with Krechel covering more aspects of this behavior than does Dieter. From speech Krechel infers personality; Dieter, thought types. There appears to be a striking similarity between the *Formalistic* type of thought which Dieter describes and the *Selective* type of speaker which Krechel describes. The *Selective* type of speaker is interested in ideas and ideational connections. The *Formalistic* type of thinker is rooted in the intellectual. The *Selective* speaker is characterized by his use of vague dimensions and rough sketches. The *Formalistic* thinker is "distancing." The *Selective* speaker sees the world as an ordered illustration of his ideas. The *Formalistic* thinker imposes his will and logic upon the outside world. The *Selective* speaker has a static, solemn style, lacking in picturesqueness. The *Formalistic* thinker is perseverative and static, intellectual and causal.



On this level of description, it is easy to conceive of the same individual doing this speaking and this "thinking." By listing all the descriptive phrases used by the two writers, one can, with a certain degree of subjective meaningfulness, group them all under Krechel's typological words and, with an equal amount of satisfaction, group them under Dieter's two types. This is almost tantamount to saying that "thought," as Dieter seems to view it, is one aspect of speech.

Taken together, the two pieces of work suggest that if the aspects of speech they describe were empirically examined, if reliable categories of analysis were used, and if individual consistency exists, we may discover "thought-speech" dimensions or traits or "general factors." The two researches propose categories which promise to bear fruit when quantitatively applied.

#### THE LANGUAGE OF THE CHILD

In 1931 McCarthy (61) listed 148 publications dealing with the language of the child, and since that time the rate of publications in this area has probably been accelerated. This literature adds up to two things: a method and a plethora of data. The data leave something to be desired, for the persistent concern for developmental norms and for data *qua* data surrounds much of the work with a theoretical vacuum. But the method is interesting. The quantitative study of childhood language is shown to be feasible. This method, applied to an orderly assortment of problems possessing conceptual unity, holds considerable promise for the psychology of language.

Not all researches in the child's language, however, can be accused of lacking theoretical implications. Piaget (77, 78) and Markey (60), among others, have brought system and sense into the great assortment of facts. Piaget's classical work relates language and thought to the process of socialization. Markey, traveling the same conceptual road, marshals miscellaneous facts to support the thesis that the "symbolic process"—language and thought—is produced and forged by the social environment.

"Speech reactions," Markey writes, "are primarily to be considered causally or functionally as a response to the total stimulus situation before the reagent" (p. 145). Thus, speech is behavior. It is behavior which serves as a direct tool of adjustment, and, more importantly, it is behavior entering indirectly into more overt and more obvious adaptive actions to complicate and delay, but

always, in the long run, to facilitate adjustment. Markey finds that the data from childhood language support such an interpretation. And his systematization of these data pave the way for hypotheses regarding the psychological significance of certain usages in the speech of adults.

To demonstrate the socialization of speech, Markey cites data showing that as more and more people insert themselves into his psychological world, the child employs more pronouns of the second and third person, fewer of the first person. The exodus from egocentrism, brought to pass by the social world, reflects itself in the child's speech. Hand in hand with this development, Markey asserts—and there are others who see eye to eye with him in this—there is a marked decrease in the frequency of "action" words. As the social world expands, the child is less concerned with the immediate personal use of things and becomes more involved with substances and abstractions. The Ego no longer lurks in every corner of the symbolic process.

There is reasonably good evidence that the advancing socialization of the child is accompanied not only by a decrease in first-personal pronouns in his speech but also by an increase of nouns and their adjectival qualifiers, while verbs and adverbs decrease in frequency. Since the child, untutored in the ways of grammar, may include all known parts of speech in a one-word sentence, there is an inherent danger in grammatical classification of his speech. But with an eye to this danger, we still are tempted to extrapolate to adult speech and ask whether the frequency of nouns, adjectives, verbs, adverbs, and pronouns may not be related to the degree of socialization in adults.

In this connection, the personal pronoun has received some attention. That the frequency of the first person singular is related to egocentrism is neither a new nor erudite notion, but such a relationship has never been thoroughly examined. Certainly we would expect to find individual differences in pronominal usage, and we would not be surprised if these individual differences correlated with the degree of what G. W. Allport (4) has called the "extension of the self." One man might talk half a day with his Ego remaining entirely dormant. Another, like the chronic gesticulator in a telephone booth, might find his conversation completely stalled if "I" and "my" were taken from his vocabulary.

Anderson (6) has made a study of pronouns in the themes of college students, revealing pronounced individual differences but no conclusive

evidence of individual consistency in pronominal habits. His low coefficients of consistency may be due to the fact that there is no consistency. A better guess, however, is that the apparent lack of consistency is due to (1) the smallness of the samples of speech, (2) the fact that any two samples from any one student may have represented responses to totally different psychological situations, or (3) the fact that these were written compositions; the painful deliberation involved in writing a college theme may yield less consistency and less "naturalness" than oral performances. A fourth possibility is that an invariant egocentrism of the individual is expressed in varying ways, only one of which, and maybe an unimportant one, is the use of first-personal pronouns. Each of these four hypotheses about Anderson's results is also a more general hypothesis regarding speech and personality. They apply to any single usage we might wish to study, and they present problems which can be experimentally attacked.

We can keep the hypothesis that personal pronouns are an index of egocentrism. And extrapolating again from children's speech, it is possible to reason that "action" words, adverbs, nouns, and adjectives are either positively or negatively correlated with first-personal pronouns and with egocentrism.

Another line of research, related to the foregoing, appears to be pertinent to general linguistic psychology and to the problem of individuality. It stems from Piaget (78) and his work with the phenomena of subordination. Piaget maintains that an increase in the frequency with which the concept of cause appears in speech goes hand in hand with increased socialization of the individual. The young child, being egocentric and unmindful of the auditor, feels no need to explain his judgments. His thoughts—and his speech—are direct and unselfconscious. He talks but does not communicate, juxtaposes but does not explain. As he comes in contact with the social world, he finds that he needs to justify his statements. He learns to anticipate questions or objections and to answer them in advance. Hand in hand with this need for justification goes an increased facility in, and frequency of, explanation.

... the need for checking and demonstration is not a spontaneous growth in the life of the individual; it is on the contrary a social product. Demonstration is the outcome of argument and the desire to convince (77, p. 15).

Only by means of friction against other minds, by means of exchange and opposition does thought come to be conscious of its own aims and tendencies, and only in this way is it obliged to relate what could till then remain juxtaposed (78, p. 11).

The more the child runs into this social friction, the more he

"thinks" and the more does he use the concept of causality in his speech. For him the use of "because" seems to indicate a need to justify his statements, a need to answer questions in advance. Proceeding from this conception to adult speech and arguing possibly more on the basis of analogy than logic, it is possible to set up the hypothesis that the frequency of the use of cause concepts in adult speech will be connected with the same need for justification. Or to phrase it differently, the hypothesis might stand that the frequency of "because" in adult discourse will correlate negatively with dominance. The overbearing, ascendant, self-confident individual, making dogmatic and unexplained statements, presents a consistent picture. At any rate, Piaget gives us an hypothesis concerning the functional significance of cause concepts in speech.

In further considering this notion, one is given to wonder whether all subordinate clauses do not serve a similar psychological function. Piaget speaks of subordination as replacing coördination or juxtaposition in the language of the developing child. The concept of cause may be an example of a wider tendency. It can be argued with some degree of reasonableness that all subordinate clauses are akin in function to the clauses of cause. They may represent justification, or the answering of questions before they are asked. Piaget's work at least does not contradict such an interpretation. And there is evidence that all subordinate clauses increase with age.

LaBrant (54) has demonstrated that the frequency of subordination increases with both chronological and mental age, and she gives us some indication that the individual's use of subordination is an invariant aspect of his speech. As socialization advances and the need for justification or explanation of statements is impressed upon the child, we can argue, he employs more subordinate clauses of all varieties.

Particularly does the noun clause lend itself to interpretation in terms of a need for justification or a need to avoid "going out on a limb" in verbal statements. As the speaker becomes more aware of his own fallibility, direct statements are replaced by more cautious indirections such as "it seems that," "I think that," "he said that," each expression being followed by a noun clause. This may be a developmental process culminating in the scientist's predilection for similar devices to avoid dogmatism, the impression of extremity, and personal accountability for his statements. It would be interesting to compare scientific writing with, say, novels,



in the frequency of these noun clauses and other devices which express limited certainty and limited commitment. This comparison would probably be very dramatic if doctoral dissertations were used as examples of scientific writing. We might expect that diffidence and uncertainty would be at a peak in such writing. On the other hand, it might be that diffidence before the truth has to be learned and that a little learning is a dangerous and dogmatic thing. At any rate, here are *a priori* grounds, slightly backed by data, for making the hypothesis that noun clauses have for the speaker the psychological function of indirection and demonstrate a tendency away from dogmatism. We also can make the hypothesis that such noun clauses will correlate with other statements of uncertainty or limitation such as "possibly," "perhaps," "maybe," "to some extent," and certain of the modal auxiliaries ("might," "could," "may").

It is interesting to note that the amount of subordination in the child's speech is positively correlated with intelligence only up to a certain age. LaBrant found a correlation of  $+0.29$  for children, while Anderson found none in his work with college students. This suggests the possibility that, after the individual reaches his peak in intelligence, nonintellectual factors become more operative in determining his index of subordination. If we follow Piaget's general thesis, there are only secondary reasons for a relationship between intelligence and subordination. Mental age may be a factor only in so far as it facilitates the learning of a social lesson and helps in the formulation of an operative "generalized other." Possibly in adults we should expect a relationship between subordination and certain personality variables. The problem remains a problem.

Though the researches in the child's language have no immediate relevancy for the present problem, the data can be interpreted so that they furnish grounds for hypotheses regarding adult speech and adult personality. Young's (105) data pertaining to length of sentence and the various parts of speech might be given a treatment similar to that accorded here to pronouns and subordinate clauses.

#### SEMANTICS AND THE INDIVIDUAL

The recent concern with semantics or "word-fact relationships" has, among other things, raised the problem of individual differences in semantic habits and the psychological significance of "poor" semantic practices. Korzybski (52) has claimed that training in semantical self-consciousness has far-reaching effects on broad personal adjustments of the individual. Johnson (47) concurs in this notion and has presented an outline for a course in

"Remedial Semantics." Hayakawa (41) further develops the trend of thought in his analysis of "Language in Action."

The hypothesis, stated broadly, maintains that the individual who applies rigid Aristotelian class-words to a world which is not rigid and not Aristotelian will sooner or later run afoul of the inevitable misfit between his words and the world. If he reacts to the world of "dynamic process-reality" on the basis of static classifications, his adjustments will be inadequate, his predictions will prove erroneous, and his mental stability may be undermined. Concepts have a "fixing effect" when applied to "reality." If the person assumes an identification between these fixed words and a reality which refuses to be fixed, he runs into difficulty. Even dental caries, it has been claimed, may be produced by improper semantical practices (10, 11).

Writing on a more specific level, Korzybski has described the "attitude of allness" and the kind of person in which this attitude inheres. This "attitude of allness" refers to a tendency toward broad and invalid generalizations, the tendency to infer readily to "all" from "some." The individual who attempts to solve his problems on the basis of "dramatic instances" would be demonstrating this semantic attitude. He "abuses" the process of abstraction, identifies words and objects, and confuses high-order abstractions with low-order abstractions. Such individuals, Johnson (47) writes, "act as if knowing, say, a second-order verbal abstraction were the same as knowing the abstract (the first-order description) from which it has been abstracted" (p. 32). Johnson proceeds to a description of the personality which is claimed to occur in conjunction with this tendency toward identification and allness.

Armed with their highly verbal "knowledge," they assume attitudes of authority, become dogmatic, and then become very indignant, disappointed, hurt, even paranoid when contradicted or challenged. Persistently asking such a person, "What do you mean?" is an almost sure-fire way to get him angry.

Or, they act as if, knowing a description or "having a name for it," they know *all* there is to know, and they evolve theories, make plans, join clubs and start movements without bothering to examine the actualities they are presumably talking about.

Such identification and attitudes of allness as the above are characteristic of the "lunatic fringe," the "cranks," the "thirty-dollars-every-Thursdayites," the "eighteen-day-dietists," and for that matter, the "die-hards" of every variety, whether die-hard Republicans or die-hard Trotskyites, or "blind" patriots, or the politicians who "believe now,

always have believed, and always will believe" whatever it is they believe. And along with them is to be classed the little six-year-old boy who "knows everything," with the qualification that for him to be "infantile" in this sense is to be relatively "normal" because of his tender age, and relatively undeveloped cerebral cortex (pp. 32-33).

The opposite to this "attitude of allness" is described by Korzybski as "conditionality of response." Remedial semantics is partly aimed at establishing in the individual this tendency toward conditionality, or precisely qualified and quantified responses, tentative conclusions, and an adequate degree of uncertainty—in short, teaching the "certainty of uncertainty."

Korzybski also places considerable emphasis on excessive bodily tensions as related to "bad" semantic habits and to personal adjustments. Whether hypertonicity produces "bad" semantics or vice versa is an unsolved problem, but this lack of relaxation is seen as occurring hand in hand with other symptoms of semantic disorders. Again we turn to Johnson (47), whose prose generally possesses greater clarity than that of Korzybski.

The tendency to show "undelayed" reactions is consistent, of course, with a condition of hypertonicity. We rather expect a "tense" individual to be "jumpy," "nervous," "irritable," "quick to take offense," etc., to show "hair trigger" reactions generally. It is the relatively relaxed individual whom we rather expect to be "thoughtful," patient, tolerant, to suspend judgment, to consider the many sides of a question, to be "collected" and unexcited in emergency, etc.

The general picture, then, of an individual's behavior in which we see evidence of identification, allness, hypertonicity and "undelayed" reactions, appearing together, is a "consistent" one with which we are familiar—although we may or may not have been accustomed to speaking of it in exactly these terms (p. 38).

These writers appear to assume that bad semantic habits produce a paranoid, jumpy, irascible, cranky personality. As they paint the picture, we can believe that there is a relation between the cart and the horse, but which is cart and which is horse is not yet settled. Bad semantical practices, picked up through a faulty education, may produce a certain sort of behavior. On the other hand, faulty semantics may be a symptom of paranoia, jumpiness, irascibility, crankiness, etc., with each of these ailments having its roots deep in psychic or temperamental subsoil. But before we worry too much about the direction of the relationship, the relationship itself is in line for close examination.

Johnson also suggests the relevancy of applying to the problem

of individuality what is known as the "type-token ratio." This is the ratio of the number of different words (types) to the total number of words (tokens) in a given passage. This function is recommended as a more dynamic and valid measure of vocabulary than simply ascertaining the number of words a person "knows" or can define. Johnson suggests that it may be used to indicate the "stimulation value" of any situation, that it will be found to correlate with intelligence, and that the ratio might serve as a measure of degree of frustration, or of disorientation. "The phenomena referred to as the 'one-track-mind,' or 'monomania,' should be amenable to quantitative treatment in terms of the type-token ratio" (p. 11).

Johnson also presents a review of various quantitative studies of verbal behavior. While these do not possess clear relevancy for the problem of individuality in linguistic usages, they do suggest the potential fruitfulness of examining speech behavior quantitatively. For instance, what is a sentence, psychologically conceived? And what are the situational determinants of its length and complexity? What factors determine quantitative verbal output? How does verbosity vary from individual to individual and from situation to situation? These are relatively simple problems, but ones which must be answered if we are to have an adequate psychology of language.

One of the interesting aspects of the general hypothesis that relates semantics and adjustment is the direct inference (not yet demonstrated as justifiable) from linguistic behavior to other behaviors of the individual. This relationship between verbal and nonverbal behavior is a vast *terra incognita*, but one in which explorations are being made at the present time. Once we view speech as behavior and escape the limitations of that dualistic notion that sees language as the "expression of ideas," the field promisingly lends itself to investigation. We may eventually gain a more incisive understanding of the psychological function of language and of the psychological nature of specific linguistic usages. As Dewey (29) pointed out 50 years ago, we know very little about the psychology of an adverb or a noun or any other part of speech. One approach to this problem, although an indirect one, is to find out what sort of individuals use what sort of language, and further, what linguistic usages, if any, tend to occur together in the same individual. We may know the adverb by the linguistic company it keeps.



DIAGNOSTIC SIGNIFICANCE OF SPECIFIC LINGUISTIC  
CONSTRUCTIONS: THE VERB-ADJECTIVE RATIO

Now and again we hear the assertion that some particular habit of speech reveals a deep personal trait. We have already had a look at Korzybski's diagnosis of the person who uses many "all's" and "every's" and at the possible diagnostic significance of first-personal pronouns. There are other linguistic constructions, of the same order of complexity, that have been alleged to serve as key-holes through which we can get a peek at "inner" personality.

The psychoanalyst, in off-the-record conversation, may suggest that certain specific sounds in the individual's speech may have a symbolic and diagnostic significance. For instance, a predilection for the explosive *p* sound may indicate that the speaker is symbolically indulging in some manner of noxious emission upon his audience. Typesetters will observe that one author regularly uses more *p*'s or *m*'s than another. In view of the work on phonetic symbolism, we can conceive of an individual demonstrating a predisposition to use explosives, sibilants, fricatives, or "large" vowels, for instance, since the evidence tends to indicate that these sounds, as separate from their use as parts of meaningful words, have symbolic and possibly expressive significance. Along this line, Jespersen (46) suggests that the phonetic structure of a language reflects the characteristics of the people who speak it. English is a "masculine" language because, for one thing, so many of its words end in well-defined consonants. This contrasts with the soft, musical, vowel-dominated languages of Spain, Italy, and Hawaii. "You do not expect much vigor or energy in a people speaking such a language," he writes (p. 4).

But none of these hypotheses has been dignified by systematic examination. Markey (60) and Anderson (6) have made counts of the pronoun *I* but have not attempted to get at any relationship with personality. There have been researches, however, which indicate that more or less specific characteristics of speech are diagnostic of personal traits.

In 1925 Busemann (19, 20) presented evidence indicating that the relative frequency of verbs and adjectives is closely related to what he termed emotional stability. Recording in shorthand the narratives told by children of different ages on different subjects, Busemann counted the number of "qualitative" and "active" constructions. In the former category he included all adjectives, all participles used as adjectives, and all adjectival nouns. As "active" constructions he counted all verbs except the auxiliary. The Action Quotient (Aq) was derived by dividing the number of "active" expressions by the number of "qualitative" expressions. He found that the Aq varied for a given child from year to year

and that a relative increase in the number of verbs was accompanied by an increase in emotional instability as rated by teachers. Of 26 children who demonstrated changed Aq's, those who showed a higher quotient were rated as more unstable and those who had a lower quotient as more stable than at the time of last testing. The ratings by the teachers showed no change for the four whose Aq's were unchanged.

Stern (89), commenting on Busemann's work, writes:

Busemann is right when he speaks of an "active" and a "qualitative" style: he gives the interesting proof that these "style" differences depend very little upon the subject-matter dealt with. The "actionale" person will express himself in the description of a landscape in "active" terms,—whereas the individual with a "qualitative" style will dwell even in reports of travel upon the description of more quiet impressions. The active style correlates more closely with mobility and emotions, with lower objectivity, less concreteness and less intellectuality. The qualitative style reflects the opposite traits. Evidently we have here a distinction similar to that which differential psychology long ago designated as "subjective" and "objective" types.

Balken and Masserman (8) used Busemann's Verb-Adjective Ratio in investigating the relationship between speech and types of emotional disorder. They found that this measure clearly differentiated among the three types of disorder they observed. Conversion hysterics, who are described as superficially placid and free from emotional stress, use many adjectives. The anxiety hysterics, less emotionally stable, use relatively many verbs. The obsessive-compulsive patients fall between these two extremes. These data serve to substantiate Busemann's results.

Boder (15) has pointed out a similarity between Busemann's two dimensions of speech style and Rorschach's (12) distinction between kinaesthetic and color responses in the ink-blot situation. Many kinaesthetic (verb) responses, Rorschach maintains, are made by the individual with sluggish motility, an introverted nature, and little adaptation to reality. A preponderance of color (qualitative) responses reflects the excited, alertly motile, extraverted individual with a better adaptation to reality.

It may well be that Busemann and Rorschach are dealing with much the same thing here. It might be expected that the individual who injects action into an ink blot will make a similar injection into the scenes and situations which he verbally depicts. But neither the individual who makes kinaesthetic responses to ink-blot nor the person who uses many verbs in his speech is described with enough precision to enable us to make the argument that an analysis of the mode of verbal expression is potentially as revealing and as psychodiagnostic as the ink-blot technique. Where speech is produced in response to an amorphous stimulus, it does not seem unreasonable to expect that the speaker imposes his individuality upon his speech and reveals himself in his speech just as definitely and just as richly as he does in responding to the

Rorschach stimuli. The work of Busemann and that of Balken and Masserman lend some empirical backing to such a position. But as yet we have no satisfactory evidence that individuals do differ in their use of these formal variables in speech nor that these differences, if any, are consistent differences. And there are data pertaining to only a very few of the many grammatical and psychogrammatical aspects of speech. There is no good reason why the use of verbs and adjectives should be any more psychologically meaningful than the use of nouns or of such constructions as subordinate clauses, abstract words, metaphors, similes, possessives, superlatives, copulas, passives, or modal auxiliaries, to mention only a few of the possible categories of analysis.

Boder (15), following up the work of Busemann, has made an extensive count of verbs and adjectives in various American writings. Employing categories slightly different from the original ones used by Busemann, and working with an Adjective-Verb Quotient (Avq) derived by calculating the number of adjectives per 100 verbs appearing in the text, Boder analyzed 388 specimens of writing of widely different types in the attempt to examine the Avq (1) as it varied in the writings of the same individual, (2) as it varied from individual to individual, and (3) as it varied from one type of writing to another.

The data on the first two points are relevant in the present connection, but Boder did not arrange his findings so as to give a very complete picture of individual differences or of individual consistency.

In one part of his project, Boder analyzed many samples of speech from Emerson's *Journal*, from Mencken's articles in the *American Mercury*, and from Brisbane's syndicated column "Today." For each of these writers the Adjective-Verb Quotient varied over a wide range, and the range for the three appeared to be almost the same.

Taken at their face value, these data indicate a marked lack of consistency. But before we can decide about the degree of consistency we would have to know more about the types of writing these men were doing. In this connection it is necessary to apply the distinction made by Allport (4) and others between the *expressive* and *adaptive* aspects of behavior. If Emerson were writing a scientific description, his task would be appreciably different from his task in writing leisurely essays. Boder has shown that the Avq for scientific writing is, on the average, twice that for fiction. Before we can compare the verbal behavior of Emerson with that of Mencken or Brisbane, we need to hold constant the tasks or the

adaptive aspects of the behavior. If we assume that Emerson in the course of years of *Journal* entries did as much "scientific" writing as did Mencken, then we can conclude that Emerson has a more "active" style than Mencken (in so far as a lower Avq indicates an active style). Before we can compare absolute measures of the manner in which individuals write, we need to control the adaptive aspects of the situation in which they are writing. Comparing the Avq of Emerson's exposition with that of Mencken's narration is roughly similar to comparing the absolute area of Emerson's script with the absolute length of Brisbane's stride.

Boder does not attempt to connect the adjective quotients of these writers with their emotional stability. If he had looked into this relationship, it is doubtful that he would have verified Busemann's findings. Aside from a difference in categories, Boder worked solely with written material, while Busemann based his calculations on stenographic records of oral material. It is probable that this spoken material is a richer field for psychodiagnostics. The style of professional writers is likely to be highly planned and deliberate. Spontaneous speech is more likely to tap the "natural" behavior of the individual. Klages (50) has made the point that, in matters of expression, men reveal themselves most at unawares.

From the researches of Busemann and of Balken and Masserman we can conclude that there is some manner of relationship between the individual's use of verbs and adjectives and "deeper" aspects of his personal adjustment. Boder's work neither confirms nor contradicts in any definite way this general conclusion. However, from what may be called a "psychogrammatical" point of view, the categories used by these researchers are relatively blunt analytical instruments and do not give any but a gross picture of this aspect of speech or style.

Busemann included in his "qualitative" category all adjectives of any sort. Boder included only attributive adjectives, eliminating all appositives, predicatives, nouns used as adjectives, and adjectival participles. Both Boder and Busemann counted all verbs except the auxiliaries. Within each of these broad grammatical categories, verbs and adjectives, there are linguistic usages which, upon psychological grounds, differ from one another almost as definitely as adjectives differ from verbs. For instance, the demonstrative and quantitative adjectives such as *this*, *that*, *four*, and *tenth* are not very similar in function to ordinary restrictive



adjectives such as *oblong, flat, green, and grassy*. These in turn appear to differ from the more subjective judgments *stupid, beautiful, and terrific*. Again, attributive adjectives (those placed before the noun) seem appreciably different in psychological function from predicate adjectives. The expressions *the red house* and *the house is red* represent a different emphasis on the adjective. Participial adjectives, e.g. *the running boy*, often appear more active than qualitative. Boder seemed to recognize these internal differentiations when he modified Busemann's *qualitative* category. The *active* category can be broken down in much the same manner. Some refinement of the gross categories of verbs and adjectives seems likely to yield more incisive results, for it is logical to expect the "qualitative" individual to use the less active verbs while the "active" individual may use the more active or kinaesthetic verbs.

If the investigation of the linguistic side of personality is going to amount to a great deal, the problem of choosing and defining significant variables must be met and solved. Grammatical categories are available, but they are not psychologically conceived and may not be of maximal use in the psychological study of language. For one thing, there is great difficulty in fitting everyday speech into grammatical rubrics which were tailored to fit formal prose. For another, the grammatical category, as is possibly the case with adjectives and verbs, may include constructions which, psychologically conceived, are of a different and maybe an incompatible nature. Researchers have shown that the grammatical categories are useful in the study of individuality in speech. But there is no evidence that they are the most useful categories or that a better way of classifying linguistic phenomena cannot be found.

#### EFFECTIVE SPEECH AND EFFECTIVE PERSONALITY

In recent years, with the increased availability and popularity of psychological tests, many speech clinicians and teachers have been using these tests as instruments for determining the personality traits which characterize "good" and "poor" public speakers.

Tracy (96) subjected a selected group of mature actors and public speakers to a battery of tests consisting of the Otis Self-Administering Test of Mental Ability, the Bernreuter Personality Inventory, and the Allport-Vernon Scale of Values. The public speakers, both men and women, were significantly above average in intelligence, extraversion, self-sufficiency, dominance, and in social, political, and religious values. They were average in theoretical interests, below average in economic and aesthetic interests, and below average in neurotic tendency.

Murray (69) selected from among his students 25 "poor" speech personalities and 25 "developed" speech personalities. To these he gave the Bernreuter Inventory. The "developed" speakers averaged  $98 \pm 7.14$  points higher than the "poor" speakers in self-sufficiency (raw scores)  $92.4 \pm 5.77$  points higher in extraversion, and  $134.8 \pm 8.14$  points higher in dominance. These are striking differences. But the data have only secondary psychological value in the absence of accurate description of "good" and "poor" speech. Murray does describe the poor speaker, but not without a marked dependence upon subjectivity. The psychologist is more interested in what speakers actually do than in how good or how poor they are.

Moore (66), Evans (37), and Jenks (45) have suggested that speech training can be a valuable therapeutic measure in treating personality maladjustment. Moore gave the Bernreuter Inventory to 61 students at the beginning and at the end of a college course. The course consisted of vocal exercises, oral interpretations, dramatics, debating, and "special speech mental hygiene procedures." Upon retest, the class averaged  $30.41 \pm 6.93$  points (raw scores) higher in self-sufficiency,  $26.09 \pm 5.7$  points higher in extraversion, and  $47.95 \pm 7.85$  points higher in dominance. A control group upon retest showed no significant change on either of the three variables.

Before evaluating these results, we would have to know how much the students were trained in speech and how much they were trained in making more socially acceptable scores on the Bernreuter Inventory.

Hunter (44) approached the relationship between test scores and effective speaking by first selecting the personalities and then observing their speech. Two hundred high school students were given the Bernreuter Inventory. The 27 most introverted and the 28 most extraverted were selected for observation. These 55 students were given a spontaneous speech test wherein they described or talked about a picture of a flag-draped American eagle and were required to read a narrative paragraph of 213 words. Their performance was rated by the experimenter according to such standards as poise, emotional responsiveness, gesture, vocal variety, vocabulary, organization, etc.

The author reports that extraverts were extremely good or extremely poor speakers. The introverts were likely to be less variable and less extreme. There were more inferior extraverts than introverts, but extraverts who were good speakers were more proficient than the most proficient introverts. In reading, the extraverts made fewer errors in accent, fewer omissions, and fewer substitutions of sounds, completing the passage more speedily than the introverts. In spontaneous speaking, the extraverts are described as speaking longer and using more irrelevant words than the introverts. The author gives no quantitative data. His findings have to be reservedly considered.

Knower (51) reports that "the superior speaker shows a greater tendency to ignore or remain indifferent to the personal element involved in reaction to a speaker. This evidence tends to support the contention that one quality of the superior speaker is the tendency to speak with 'abandon'." This observation is helpful in getting a psychological notion of what constitutes "good" public speaking.

These researches, though they are not as psychological as we might wish and though they are subject to methodological criticisms, do tend to indicate an intimate relation between the speech of the individual and his broader social adjustments. We would expect this to be so when we consider the number of our social contacts that are mediated and facilitated by speech.

The correlations between "effective" speaking and the various personality traits do not have material meaningfulness because there is no adequate description of what constitutes "effective" speaking. One gets the vague picture of a "good" speech as verbal response which is facile, well-coördinated, unselfconscious, proceeding "with abandon." Poor speech is halting, uncoördinated, self-conscious, and, one is tempted to say, complex. For where the description of the good speech is compounded with a description of a good speaker, one gets a picture of an outgoing, reactive, "man-of-action" organism, giving vent to behavior which is fluent, plentiful, well-coördinated, but involving few complex associative ramifications. This general sort of picture possesses some similarity to Korzybski's description of that attitude of allness and non-conditionality of response.

It appears that the "successful" public speech is one which *impresses* the auditor more than it *communicates* with him, one that stimulates autonomic rather than cerebral activity. The common auditor, it appears, does not care to empathize with the halting and self-conscious speaker or to exert any effort to understand the "thoughtful" speaker. He prefers to be gently stroked with pleasing sounds or to be towed about in an amorphous sea of affect. Possibly the speaker who keeps his auditors away from unpleasant empathy and does not involve them in effortful implications is the dominant, extraverted, untheoretical, unaesthetic, and—again—the "uncomplicated" individual. It is interesting to compare this picture of the "good" speaker with Boring's (17) recommendation for the scientific communicator, that he always be conscious of, and altruistic toward, his audience. H. G. Wells (102), in describing his own public-speaking demeanor, gives an example of the "intellectual" man's style of speech.

... speaking haltingly on the verge of the inaudible, addressing my tie through a cascade moustache that was no sort of help at all, correcting myself as though I were a manuscript under treatment, making ill-judged departures into parenthesis ... (p. 565).

One suspects that good speaking and effective communication are different phenomena. The patient who demonstrates the manic

syndrome is probably a more proficient speaker than the scientist who sees many implications and qualifications and who is self-conscious about his semantics.

Such considerations, and the possibility of setting up experimental problems in this area, are of decided interest, particularly now that we are so concerned with the techniques by which the public can be influenced, but the present paper can only point hurriedly and proceed along its main course.

#### SPEECH IN PSYCHOPATHOLOGY

In 1916 Southard (87, 88) made the suggestion that standard grammatical terminology may be used in describing psychopathological conditions, often with more descriptive adequacy than that yielded by existing psychiatric language. The patient's subjective relationship with his environment, Southard suggests, can be clearly depicted in terms of grammatical mood, voice, etc. He does not proceed to an investigation of the actual speech of his patients or suggest that such a study be made, but there is the implication that grammatical categories are psychologically meaningful and, since "thought and language are so largely identical in mechanism," the language of the individual should reflect his general adjustment.

It has been observed frequently that the various pathological syndromes have characteristic verbal behavior, and this behavior has been used in classifying cases.

Several writers have been somewhat more than casual in observing the speech reactions of familiar syndromes. White (103), Stockert (91), Teulie (94), Swift (92), Gruble (40), and Zipf (106) have written concerning these phenomena. Eisenson (33) summarizes these observations, presenting a general description of the verbal behavior of manics, depressives, and schizophrenics. The manic is described as talking incessantly and rapidly. His style tends to be telegraphic, and the rapid tempo of his speech often produces faulty pronunciation. He pays little attention to the auditor, flitting from one topic to another and omitting many connective constructions. The depressed patient talks as if all speech were an unwelcome and burdensome chore. He exhibits little diversification of tempo, voice, or subject matter, proceeding slowly and with monotony. He is complete and repetitive where the manic is telegraphic and diversified. The schizophrenic speaks with a consummate scorn for the auditor, employing neologisms and disarranged speech forms. His meanings are often purely idiosyncratic. His speech is colorful but often unintelligible. He fails to cover the ground the manic does and demonstrates less variety in form and content. His speech is of a low order of abstraction, though, White (103) points out, he uses abstract terms for concrete refer-



ents. He may demonstrate his scorn for the auditor by refusing to speak at all.

From these descriptions we get the general impression that the speech of the psychotic is at least roughly consistent with the rest of his behavior. Eisenson (33) is led to remark that "a disorder in the use of speech of any type or degree reveals a disorder in personality" (p. 166), and further, "we should realize . . . that any personality change, and any appreciable deviation from the norm in the mentality of an individual, will be reflected in his speech" (p. 190).

Newman and Mather (72), dissatisfied with these general descriptions of the speech of psychopaths, made a somewhat more analytical observation of the phenomena involved. The speech of patients was phonographically recorded as they read certain selections and as they spoke spontaneously. These samples of speech were checked against a schedule which included items pertaining to pitch, emphasis, articulatory movements, tempo, syntactical factors, length of response, etc. The three pathological syndromes described as *classical depression*, *state of dissatisfaction and self-pity*, and the *classical manic state* were shown to be clearly differentiated on the basis of the variables observed. The results are not at variance with the descriptions given by previous writers, and where there is coincidence of nosology, the picture is more complete than that given in casual and molar observations.

In a conclusion to their study these authors state: "Except in a purely formal sense, speech is not a self-contained category of behavior. Together with other behavioral forms it provides external symbols of human functioning, and one can therefore expect and find relations between speech and other modes of behavior."

In a further study of the "relation between speech and other modes of behavior" Newman (71) observed over a period of time written compositions of one girl and reported that states which he described as vague confusion, violent defiance, and calm reaction to conflicts are revealed in the language of the subject. Such categories as contrasts, degree concepts, sentence structure, superlatives, interrogations, "shock-words," and conventionality of punctuation were employed for the analysis, and the changing emotional states of the subject were seen reflected in these linguistic usages. The author does not present any concrete data to back up his conclusions, but his discussion of the case is provocative and convincing. In connection with the potential value of the study of verbal individuality, Newman writes: "Language is merely one form of culturally defined behavior that takes place in the context of human interaction. As such it fulfills multiple functions. In language behavior we must be prepared to find symbolic manifestations of the same kind of human functioning displayed in other areas of behavior" (p. 178).

We can conclude that major aberrations of personality are reflected in verbal behavior. But we still have no precise and complete picture of the speech of abnormal subjects. The area recommends itself for further investigation, for, as has been the case in much of psychology, a study of the abnormal may contribute to an

understanding of the normal. The study of psychopathological speech may be one fruitful approach to a general psychology of language and, more specifically, to an understanding of linguistic usage as it is related to other modes of behavior in the specific individual.

Proceeding further toward an objective and analytical study of psychopathological language, Balken and Masserman (8) worked with the speech of patients which they classified as *conversion hysterics*, *anxiety hysterics*, and *compulsive-obsessive neurotics*. They selected 15 patients of uniform intelligence (IQ, 118-138), 5 of whom were judged to fall into each of the above three categories. Twenty Thematic Apperception stories were told by each subject, recorded verbatim, and subjected to frequency-counts with respect to certain "psychogrammatical" categories.

The authors report that the three syndromes are clearly and statistically differentiated with respect to the variables employed. For example, the conversion hysteric, who has achieved a superficial emotional placidity, tells stories involving a plethora of leisurely material, using many adjectives, few verbs, little alternation, little qualification of statement, etc. In anxiety hysteria, on the other hand, the phantasies are brief and dramatic. There are many verbs, few adjectives, many alternatives, and many expressions of vagueness and uncertainty.

Taken all together, observations and experiments upon the speech of abnormal individuals demonstrate that abnormality of adjustment is revealed in linguistic behavior and that more or less specific syndromes are accompanied by more or less characteristic speech usages. The detailed description of the speech of the various types of disorders is by no means complete, but Newman and Mather suggest one fruitful approach, and Balken and Masserman propose another. The latter appears particularly promising because of the greater possibilities of objectivity and quantification. The Thematic Apperception technique (67) has shown how revealing is the content of phantasy productions; now we have indications that the formal aspect of utterance also has psychological significance. With both form and content yielding meaningful data, an adequate sample of speech may be an impressively economical and revealing source of information about the individual. Diagnosis is based upon the observation of behavior and inference therefrom to "inner" characteristics. If speech is looked upon as behavior and if speech can be objectively and quantitatively treated, then observation can be more precise and inference more incisive. Such diagnostic use of speech, though it does not appear beyond the realm of ultimate possibility, is many experiments

removed from realization. If we take the foregoing research at its minimal value, it at least recommends further investigation, and, more specifically, suggests again the fruitfulness of quantitative analysis of verbal expression.

#### VOICE AND PERSONALITY

Since Pear's (75) pioneer experiments there have been several researches upon the relation between voice and personality, all pointing to the fact that personality gets into the voice and can be perceived there by sensitive judges.

Rieffert (81), believing such dimensions of voice as melody, rhythm, pitch, tempo, etc. to be expressive of temperamental traits, has devised a characterological typology of *Sprechweisen*. Herzog (42), Taylor (93), Cantril and Allport (21), and Fay and Middleton (38, 39) have approached the problem experimentally. Of these studies, that of Cantril and Allport is the most comprehensive. Employing the matching technique, these authors found that judges, upon hearing the voice of a speaker, could, with considerable accuracy, make statements concerning physical and psychological traits of the individual. The more highly organized psychological traits were judged more successfully than physical features and superficial characteristics. All along the line the accuracy of judgments exceeded chance, but these authors found, as did Pear and Taylor, that the agreement among the judges was often greater than the accuracy, due to the presence of judgmental stereotypes.

Downey (32), Wagoner and Downey (99), and Wagoner (98) have indicated a relation between temperament and the rhythm, tempo, etc. of vocalization. Wagoner stated the principle thesis here as follows: "The intimate relation between vocalization and temperament finds expression not only in the quality of the voice but also in the mode and speed of articulation. That idiosyncrasies of speech are directly related to emotional states is so commonly acknowledged as to be an important factor in 'sizing up' a new acquaintance or a prospective employer" (p. 237).

The individual who speaks rapidly and with great impulsion is described as performing other acts in much the same manner, and the individual who speaks with great deliberation or hesitancy is, in nonverbal behavior, low on speed of movement, slow in making decisions, low on motor impulsion and finality of judgment, and has great interest in detail.

These conclusions were based on results from the Will-Temperament test. But since neither Downey nor Wagoner gave much thought to reliability or validity in their measurements, their observations cannot be taken as conclusive. Common experience, however, verifies a relationship between temperament and these motor aspects of speech.

We can conclude that certain aspects of personality are expressed in the voice. So far, this phenomenon has been studied

mainly at the level of impression. Judges can sense personality in the voice and can decide which voice "belongs" with which traits. One wonders whether this connection is of the sort that must be sensed by judges or whether it can ever be analyzed and stated in a quantitative manner.

Metfessel (65) and Tiffin (95) have devised apparatus and techniques for recording voice in such a way that the factors of pitch, intensity, and time can be measured precisely. These techniques have been used widely in the study of "good" and "poor" speaking. Murray and Tiffin (70) describe no less than 12 sensitive measures of voice. Lewis and Tiffin (57) have used these measures in the study of individual voices, but they were interested in what constitutes a good voice rather than in the relation between the various dimensions of voice and the various dimensions of personality.

The new phonophotographic and strobophotographic techniques possibly ought to be turned upon the problem of voice and personality. There is always the possibility, however, that the connection between the personality and the expression will be lost in "hard-headed" analysis. The early psychological investigations of handwriting and personality (43) revealed no impressive correlations between molecular, but measurable, variables and any personal traits. The work of Allport and Vernon (5), carried out at a more molar level, shows that handwriting and personality are connected. Early studies (74) conclusively showed that physique and personality have very little to do with one another. Sheldon (84), employing new variables and a new approach, tells us convincingly that physique and personality are intimately related. The history of these two problems appears to demonstrate how an unhappy choice of variables can obscure or even obliterate relationships. With respect to voice and personality, we can start with the evidence that they are related. The analytical approach, if judiciously employed, may clarify the relationship. If such an approach reveals no relationship, we would be forced to conclude that it may be the fault of the approach.

#### DISORDERS OF SPEECH

Just as insanity attracts more attention than sanity, disorders of speech have been studied more intensively than normal linguistic phenomena. While it is impracticable here even to scan the literature dealing with disorders of speech, it is worth while to point out that researchers are almost unanimous in insisting that linguistic disorders, especially stuttering, are closely related with



broad aspects of personal adjustment. There is no unanimity, however, as to what the relation is. In connection with stuttering, there are those who insist that the malady is produced by some disorder of personality, while others are equally sure that any concomitant personal maladjustment merely follows in the wake of stuttering. The whole literature pertaining to this disorder is contradictory and difficult. One is given to wonder if some of the verve that has gone into the investigation of stuttering might not have been better spent upon the less dramatic, but potentially significant, "roughnesses" that occur in normal speech. A study of the repetitions, rephrasings, and hesitations of everyday speech might well throw light upon stuttering and, in addition, contribute to our knowledge of normal linguistic behavior.

Eisenson and Pastel (35) have demonstrated that stutterers are unable to adjust rapidly to changing stimuli. The past reaction, through perseveration, tends to clutter up the new adaptation. Also Eisenson (34) has shown that stutterers, while more "talkative" than normal children, have marked difficulty in organizing their "thoughts" into coordinated discourse. The present writer, in an experiment now in progress, has marshaled data which indicate that normal "roughnesses" of speech are related both to perseveration and the inability to organize or arrange words into precisely concatenated sentences and paragraphs. The individuals who repeat words or phrases also "revise" or rephrase frequently, and their speech is characterized by many hesitating sounds ("uh" or "er"). There are indications that these speakers do not demonstrate a large diversity of subject matter or vocabulary and that they face a large number of complicating "choice points" in getting from one end of a sentence to the other. Instead of giving verbal responses in a smoothly concatenated chain, these speakers tend to pause frequently, to repeat a previous word or phrase, to make a tentative response and then rephrase it, and frequently to say "uh" while one of several potential responses gets the upper hand. The hesitating sound appears to indicate complexity more than it does a vacuum.

These preliminary results suggest that the "roughnesses" of normal speech are cousins to the phenomena of stuttering. There is the hint that a study of these "roughnesses" may reveal important intellectual or ideational traits of the individual. Also there is the possibility of a counterpart in nonverbal behavior. One wonders if the stutterer stutters in the performance of a complicated manual task.

#### SUMMARY

An empirical psychology of language is coming into existence. One branch of this development is the problem and the fact of a

relation between linguistic behavior and personal adjustment. There are many indications that language is a vehicle of personality as well as of thought, for when the person speaks, he tells us not only about the world but also, through both form and content, about himself.

Investigators of literary style, employing the matching technique, have demonstrated that the man is in his style and can be seen there by sensitive observers. Other workers, coming to the problem on a more molecular level, have found individuality in the lexical and syntactical carriers of style. Implicit in the latter studies is the notion that a close scrutiny of the cues involved in the judgments of style may bring style out of the clouds and down to a plane where we can treat it in terms of precise and communicable data.

Sustaining and documenting the notion that language bears importantly upon personality is the evidence that mental disorders are mirrored in speech, that effective speech goes hand in hand with effective personality, that the nature of the individual's semantic habits determines (or reflects) the nature of his adjustment, and that disorders of speech are tied up with disorders of personality. On a more specific level, there is evidence of a relation between emotional stability and the verb-adjective ratio. Other "psychogrammatical" variables appear to be involved with more or less specific traits of personality, and further, there is reason to believe that such constructions as subordinate clauses, abstract nouns, personal pronouns, etc. have correlates in personality. All along the line there are data, reasonable arguments, insights, and hunches, adding up to the conviction that by his words a man may be known.

We can accept it as a fact that speech and personality are related. But before we can get to the bottom of this relation there are many bridges to cross. The problems are still more numerous than the facts. Besides the many problems regarding the personal significance of specific linguistic constructions, there are other, and probably more fundamental, questions to be settled. We can list a few. What sort of variables can be used most profitably in the analysis of speech? The grammarians give us a multitude of analytical categories, but this may not be much of a gift, for the grammatical rubrics are of untried objectivity and may be of limited psychological significance. Is the individuality of speech too delicate a thing to submit to quantification and analysis? Will statis-

tics blur and obscure personality, or bring it out into the open where we can come to grips with it? What sort of speech should we study if we are hunting for personality; does the individual reveal himself more in written or oral language? In any sample of speech, how much of the response is attributable to the stimulus situation and how much to "personal" determinants? Must we remain on the level of specific variables and specific correlations, or are there general factors and broad dimensions of linguistic individuality?

These problems can be solved by experiment. It is not too far-fetched to suppose that their solution will lead into a new and profitable way of making predictions about the individual.

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## ATTITUDES TOWARD WAR

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### INTRODUCTION

At the close of World War I the desire for peace was great and hence there was much wishful thinking. Many believed that war had finally been discarded as a means of settling international disputes and that it had been forever banished. This appeared to be a logical belief because the slogan on their lips for more than a year had been "A war to end war." In view of this prevailing attitude, it would have seemed absurd to interrogate people concerning their attitudes toward war. Hence it is not until the middle of the lush twenties that we discover some interest in the attitude toward war, and not until the late thirties that studies come in any volume.

No doubt, there are many factors that aroused social scientists to an interest in war attitudes. In passing, we shall mention but a few of the more general ones. The first clash between China and Japan in the twenties clearly indicated that war had not been completely discarded in all parts of the world. Mussolini's aggression in Ethiopia, that came somewhat later, further jolted, however slightly, our complacent faith in permanent peace. War again became a reality, with renewed interest in attitudes toward it. A marked surge in this interest is noted around the period of the Munich conferences, and another with the actual outbreak of World War II.

Aside from these world events that undoubtedly led to the examination of war attitudes, we find another factor, namely, the so-called militarist-pacifist controversy that centered around voluntary and compulsory military training in high schools and particularly in colleges and universities. The one group maintained that military training fostered a favorable attitude toward war, while their opponents maintained with equal vigor that such training accomplished the very opposite. This dispute was, as we shall see, the impetus for several of the studies considered here.

The purpose of the present article is two-fold: first, to present a summary of the various studies dealing with attitudes toward war exclusive of Public Opinion Polls; and second, to indicate the general trend of the thinking and the evaluation of such data as these studies present.



## PERIODS OF TESTING

The studies of attitudes toward war may be divided into three temporal groups according to the logic of world events. First, there are those that belong to the "pre-war" period (before September 1, 1939); second, those that belong to the period known as the "phony-war" (September 1, 1939 to May 9, 1940), and third, those that belong to the period after the invasion of the low countries or the "post-invasion" period (May 10, 1940 to December 7, 1941). Since the data reported in the articles listed here were collected before the entrance of the United States into the war, we may place December 7, 1941 as the terminal date for the third period.

Because the "pre-war" period covers several years, a rather long list of articles appeared in this period, most of which belong to the latter part of the period. Those belonging to this period are: Carlson (2), Corey (3), Droba (6, 7, 8), Dudycha (10, 11), Duffy (12), Farnsworth (14), Ferguson (15), Fromme (16), Gristle (18), Jones and Jones (21), Jones, V. (22, 23), Koga (26), Porter (30), Rogers (31), Smith (32), and Zubin and Gristle (35). Data were collected during the eight-month period of the "phony war" by: Barkley (1), Doob (5), Droste and Seyfert (9), Dudycha (10, 11), Johnson (20), Jones, V. (23), probably Kuhlen (27), and Middleton and Fay (28, 29). Those collecting data during the "post-invasion" period are: Dudycha (11), Erickson (13), Ferguson (15), Gilliland and Katzoff (17), Hartmann (19), Jones, V. (23, 24), and Katzoff and Gilliland (25). Since the exact time when data were collected for several of the studies is in doubt, the exact period to which they should be assigned is a question. These are: Day and Quackenbush (4), T'an (33), and Whisler (34), all of which were published in 1940. Since the publication date is usually one to two years after the date when the data are collected, we have some idea of the period to which they belong.

## SUBJECTS QUESTIONED

In only two of the reports included here were adults, not in academic seclusion, questioned or tested. These reports were made by Droste and Seyfert (9) and Fromme (16). For obvious reasons most of the investigators used college or university students as subjects. Consequently the present summary is by and large a report on the attitudes of college students toward war.

The articles reporting data for college students may be divided into three groups: those that present data gathered from men, those from women, and those that used mixed groups and did or did not make sex distinctions.

To the first group (those using male subjects) belong the following: Farnsworth (14) who reported on freshmen, Jones (22) on freshmen and

sophomores, Doob (5) apparently on upper-classmen, and Droste and Seyfert (9), Gristle (18), Rogers (31), and Zubin and Gristle (35) who did not indicate the classification of their men. We may presume, however, that the subjects of this latter group were for the most part beyond freshman standing.

In only three of the reports are women subjects used exclusively. Barkley (1) and Duffy (12) both used freshman women, and Corey (3) used freshman and sophomore women.

Studies that present data for both men and women are as follows: Whisler (34) used freshmen, Dudycha (10, 11) and Jones (23, 24) both used freshmen, juniors and seniors, Carlson (2) seniors, Droba (7) and Gilliland and Katsoff (17) apparently used upper-classmen; Day and Quackenbush (4), Ferguson (15), Hartmann (19), Johnson (20), Katsoff and Gilliland (25), Koga (26), Kuhlen (27), Porter (30), Smith (32), and T'an (33) do not definitely indicate the classification of their subjects. Although Ericksen's (13) brief note does not indicate who his subjects were, they may have been college students.

Five publications present data for high school students. These are Jones and Jones (21), Koga (26), Droste and Seyfert (9) who present data for seniors, and Middleton and Fay who present data for high school and industrial school girls in one article (28) and data for corresponding groups of boys in another (29).

#### TESTING INSTRUMENTS AND METHODS

The two Thurstone scales constructed by Droba and by Peterson are the most extensively used instruments for measuring war attitudes. The Droba scale seems to be preferred to the Peterson scale by many students of this problem.

Of the 20 reports giving results obtained with these scales, the following 12 used the Droba scale: Barkley (1), Carlson (2), Corey (3), Droba (6), Droste and Seyfert (9), Duffy (12), Gilliland and Katsoff (17), Jones, V. (22, 23, 24), Katsoff and Gilliland (25), and Smith (32). The Peterson scale was used in the following 8 articles: Dudycha (10, 11), Ericksen (13), Farnsworth (14), Ferguson (15), Johnson (20), and Middleton and Fay (28, 29). Koga (26) made a Japanese scale similar to the Peterson scale, and T'an (33) made a Chinese scale by the Thurstone method. Gilliland and Katsoff (17) used the same method in the construction of a scale for measuring "Attitude toward participation in war," which was used again later by Katsoff and Gilliland (25).

Prior to the construction of the Droba and Peterson scales questionnaires were used.

Both Porter (30) and Rogers (31) used rather lengthy ones. Somewhat later Jones and Jones (21) also used the questionnaire method. A number of the authors constructed their own scales. V. Jones, (23, 24) used his own scale in addition to the Droba scale after August 1940. Zubin and Gristle (35) constructed a scale for measuring militarism-pacifism which

was later used by Gristle (18). Day and Quackenbush (4) used a war attitude and a war opinion scale that they constructed. Doob (5) made a scale by the simplified Murphy-Likert technique. Kuhlen (27) used a survey blank, and Hartmann (19) a discussion question given in a final examination. Fromme (16) used the interview method with his adult subjects.

#### COMPARISON OF RESULTS

We shall summarize the results under three divisions: first, those reports that used sundry measuring instruments or scales; second, those reports that used the Droba scale, and third, those that employed the Peterson scale. The order in which those of the first group will be dealt with will correspond roughly to the dates of the data-collection periods.

Porter (30) as early as 1925 secured answers from 1,000 students to a rather lengthy questionnaire dealing with numerous aspects of war. He concluded that the students' attitudes varied with such factors as religious interest, policies of school authorities, social and economic liberalism, pacifistic literature read and speakers heard. In short, whatever their attitudes, they could be accounted for, to some extent, in terms of these influences. Rogers (31) also used the questionnaire, and like Porter tried to discover the factors that determine attitude toward war. Two-thirds of his subjects, who were male students at 10 different eastern colleges and universities, stated that no good is derived from war. Most of the other one-third of his subjects who answered this question affirmatively did not specify what good was derived. He concluded that there was evidence of indoctrination since students who believed that good was derived from war came from the same institutions and specified the same good. Zubin and Gristle (35) in 1937 and Gristle (18) in 1940 used a scale of 65 items designed by them to measure attitude toward militarism-pacifism. No results are presented by Gristle (18). All four of these authors were interested in the relationship of military training to war attitudes.

Koga (26) gave his scale, modeled after the Peterson scale, to 1,642 college and secondary school students in Japan. He reported no significant differences between his college and high school subjects, but he did find that the Japanese students are somewhat more positive in their attitude toward war than American students.

Day and Quackenbush (4) who used both war attitude and war opinion scales with 300 students at a southern university found

that their subjects had, on the whole, an unfavorable opinion about war. Doob (5) tested 135 Yale and 71 M.I.T. students with four scales constructed by the Murphy-Likert method. The first scale measured attitude toward war. On the basis of results obtained, he divided the students into four groups: pacifists, American defenders, hemisphere defenders, and Allies defenders. The first group proved to be the least belligerent and the last the most belligerent, with the other two falling in between. On the whole, however, he concludes that "the group may be thought to have been opposed to war."

Jones and Jones (21) questioned 160 Oakland, California high school students over a period of several years. Although in 1936 and again in 1937 approximately 40% of the boys and 60% of the girls believed that our country must never go to war under any circumstances, the following year less than one-third of the boys and fewer than one-half of the girls marked this statement "true." The authors attribute this shift, and other similar ones, to changing world events. On the whole these high school students were opposed to war, the girls having a greater antipathy to war than the boys. This sex difference is typical of that found generally.

T'an (33) constructed a scale by the Thurstone technique consisting of 56 statements divided into two forms. He found that of the 228 students who responded, 65.3% came very near to approval of war. Two things may contribute to this: China was a nation at war at the time the data were collected, and Chinese students are much more politically conscious than American students. No marked sex differences were reported.

Whisler (34) examined the attitudes of 144 freshmen at the University of Louisville at the beginning and at the close of a course, and he found them to be more liberal in their attitude toward war at the close of the course. The interview method, supplemented by attitude scales, was used by Fromme (16) during the summer of 1939 when he questioned 35 adult men. The low correlation between his various results, led him to observe that there may be some doubt whether one's attitude toward war is unidimensional. He suggests that each person has a complex of attitudes toward war and that the different scales measure different aspects of this complex.

Hartmann (19) submitted one question concerning war to a group of 39 students on May 20, 1940 which was a very critical



time for the Allies. Eight women (29.6%) and 1 man (8.3%) took the pacifist position, and 19 women (70.4%) and 11 men (91.7%) took the opposite position. Although the sex differences remain consistent, the marked shift away from the pacifist position was in all probability due to recent world events.

Gilliland and Katzoff (17) constructed a scale by the Thurstone technique for the measurement of attitude toward participation in the present war. This was given on May 27, 1940 to 206 Northwestern University students as well as to several other groups during the following summer. Rather low coefficients of correlation were found between this scale and the Droba scale, and the results are similar to Whisler's (34). Later Katzoff and Gilliland (25) accumulated data for 1,441 students from 9 colleges and universities scattered throughout the country and found regional differences in attitude.

Jones (23) has studied the attitudes of students toward war over a longer period of time than any other investigator. He has checked over 700 students, over 100 of whom have been followed through from their freshman year to their junior or senior year. In addition to the Droba scale, recently he has used one of his own construction. He reports that his subjects are somewhat less pacifistic since Pearl Harbor, and that there is definite evidence of a change in attitude around the period of the Munich conferences. These conclusions are based on data presented in Table I. Examining these data more closely we find that the 1930-36 seniors are reliably more pacifistic than the freshmen for the corresponding period. When we compare seniors tested early in 1941 with the earlier senior group, we find that they lean less strongly toward the pacifist position; and when we compare seniors tested after December 7, 1941 we find that they deviate from the earlier group still more. In both cases the differences between the recently tested seniors and the 1930-36 group is a statistically reliable difference. Comparing 1940 freshmen and again 1941 freshmen with the 1930-36 freshmen, he finds the shift in the same direction—away from the pacifist position.

Comparing the results obtained by Carlson (2), Corey (3), Duffy (12), and Smith (32), whose data belong to the same period as those of Jones', we find that some tend to be a little more pacifistic and others a little less so than Jones' students. In any case all of the averages, except one, fall in the category labeled

TABLE I  
MEAN SCORES OBTAINED WITH THE DROBA SCALE FOR  
MEASURING ATTITUDE TOWARD WAR

Investigator	Date tested	Type of group	Sex	Number	Mean scores
Jones, V.	1930-36	College freshmen	Men	286	6.81
	1930-36	College seniors	Men	116	7.36
	1938	College freshmen	Men	73	6.61
	1940	College freshmen	Men	69	5.58
	1941	College freshmen	Men	64	6.44
	1941	College freshmen	Women	50	6.60
	1941	College juniors	Men	38	6.79
	1941	College seniors	Men	50	6.68
	1941	College seniors	Men	?	6.48*
Carlson	1931-32	College seniors	Both	215	7.12
	1931-32	College seniors	Men	?	7.06
	1931-32	College seniors	Women	?	7.17
Smith	1932-36	College students	Both	282	6.5
	1932-36	College students	Men	124	6.4
	1932-36	College students	Women	158	6.6
Corey	1934-35	College freshmen	Women	234	6.94
Duffy	1935	College freshmen	Women	38	7.50
	1935	Parents of above	Men	38	6.23
	1935	Parents of above	Women	38	6.72
Barkley	1939-40	College freshmen	Women	68	6.83-7.51†
	1939-40	College freshmen	Women	75	6.45-7.03†
Droste & Seyfert	1940	Mil. acad. seniors	Men	40	6.4
	1940	H. S. seniors	Men	40	6.9

\* Tested after Pearl Harbor.

† Fall and spring testing of the same group.

"mildly pacifistic" or "strongly pacifistic." On the whole the women tend to lean toward the pacifist position more than the men. This is consistently the case in any one study that presents data for both sexes; and largely true when we compare results from the different studies, providing dates of testing are taken into consideration.

TABLE II  
MEAN SCORES OBTAINED WITH THE PETERSON SCALE FOR  
MEASURING ATTITUDE TOWARD WAR

Investigator	Date tested	Type of group	Sex	Number	Mean scores
Farnsworth	1932	College freshmen	Men	321	3.96
	1933	College freshmen	Men	81	3.90
	1934	College freshmen	Men	84	4.05
	1935	College freshmen	Men	108	3.50
Dudycha	1937-38	College freshmen	Both	319	3.72
	1937-38	College freshmen	Men	235	3.85
	1937-38	College freshmen	Women	84	3.38
	1940	College freshmen	Both	185	3.86
	1940	College freshmen	Men	129	3.92
	1940	College freshmen	Women	56	3.73
	1937-39	College juniors	Both	163	3.78
	1937-39	College juniors	Men	104	3.81
	1937-39	College juniors	Women	59	3.71
	1940	College juniors	Both	74	3.76
	1940	College juniors	Men	56	3.69
	1940	College juniors	Women	18	3.97
	1938-39	College seniors	Both	105	3.73
	1938-39	College seniors	Men	69	3.82
	1938-39	College seniors	Women	36	3.56
	1940	College seniors	Both	59	3.75
	1940	College seniors	Men	35	3.77
	1940	College seniors	Women	24	3.73
Johnson	1939(?)	College students	Both	68	4.0
Middleton &	1939	Delinquents	Girls	83	3.96
Fay	1939	H. S. students	Girls	102	4.11
	1939	Delinquents	Boys	139	4.52
	1939	H. S. students	Boys	75	4.13

Data obtained with the Peterson scale are presented in Table II. All of the mean scores obtained by the various investigators at different times are within the category marked "moderately opposed to war." Again we find that the women make mean scores that lean slightly more strongly toward opposition toward war than the men. There is only one exception to this in the entire table, this is in Dudycha's 1940 junior women who are slightly less pacifistic than the men. However, this group of women is very

small which may account partly for the deviation. Data taken from Dudycha afford a comparison between freshmen, juniors and seniors tested before the war and similar groups after the war had been in progress for approximately a year. All of these differences are small and none is statistically reliable. These results, then, do not seem to bear out the conclusion drawn by Jones, on the basis of the Droba scale, with similar groups of students.

#### TEST-RETEST RESULTS

Nearly one-third of the studies make some mention of retest data. Since it is very difficult to follow the same group of individuals over a period of several years, these data are necessarily limited. Porter (30) in his early study submitted his questionnaire to 97 of his 1,000 students after one year and found but slight differences. Jones (22, 23) followed a group of over 100 students from freshman to senior years with the Droba scale and found a very small, but definite, shift in the direction of greater pacifism. Again he tested 64 freshmen in September of 1941 and again in December of the same year and reports a negligible difference. Consequently he concluded that the general attitude toward war shifts but little, whereas attitudes toward specific issues may change considerably.

Farnsworth (14) retested 55 of his 1932 Stanford University freshmen a year later as sophomores with the result that the freshman mean score was reduced from 3.91 to 3.80. Again 50 of the 1932 freshmen were retested two years later as juniors with a reduction of the mean score from 3.93 to 3.50. A final group of 50 of the 1932 freshmen tested 3.72 as freshmen and 3.43 as seniors. Even though none of these test-retest differences is statistically significant, the general trend in the direction of greater pacifism, as students pass through four years of college, is noteworthy. Smith (32) gave Form A of the Droba scale to a large group of students at the beginning of the semester and Form B at the close of the semester. For the whole group of 282 students the mean scores were 6.5 at the beginning and 7.1 at the end of the semester. The results for the 124 men were 6.4 and 6.9; for the 158 women they were 6.6 and 7.2. In all cases the shift is in the direction of greater pacifism. Corey (3) using the same scale tested 100 college freshman women as freshmen and again as sophomores with a mean score shift from 7.10 to 7.19. This is consistent with the above results.



Jones and Jones (21) submitted their questionnaire four times over a three-year period to a group of 160 senior high school students. These authors observed a shift from 1936 to 1938 in the general direction of opposition to war and toward greater interest in international organizations that foster peace.

Dudycha (10), using the Peterson scale, presented retest data for 143 college students originally tested in 1937 or 1938. All of the test-retest differences were small and none was statistically significant. Breaking down the results, he found that 59.4% of the 143 students remained in the same attitude category on both tests, and that 40.6% of them shifted to a different category. Of this latter group, 19.6% shifted in the direction of greater pacifism, and 21% changed in the direction of less pacifism. Later Dudycha (11) presented data for 49 1937 freshmen retested as 1939 juniors, and 51 1938 freshmen retested as 1940 juniors. The shifts for both groups from freshman to junior year are much the same in spite of the fact that the first group was tested before the war started and the second group was tested before and again after it started. Hence it was concluded that the war had little apparent effect on these students' attitudes to that date. Barkley (1) using the Droba scale tested two groups of college women in the early fall and again in the late spring. Both groups shifted in the direction of greater pacifism on the retest. The results are presented in Table I.

Kuhlen's (27) article differs from the others in that it does not measure war attitude, but rather changes in attitude due to the war. From his test-retest data Kuhlen points out that after each major event of the present war, such as the invasion of another country, a shift in attitude toward Germany occurred in his college subjects. Gilliland and Katzoff (17) using a test of their own construction designed to measure attitude toward participation in the present war found, from test-retest data collected during the summer of 1940, that successive tests indicated a greater inclination toward participation.

#### COMPARISON OF STUDENTS WITH THEIR PARENTS

One article compares the attitudes of students with those of their parents. Duffy (12) compared the attitudes of 38 Sarah Lawrence College girls with those of each parent and found that the daughters were "strongly pacifistic" whereas both parents were "mildly pacifistic." The difference between the mean scores ob-

tained by fathers and mothers is small and statistically unreliable; but the differences between the daughters and fathers, and daughters and mothers are statistically reliable.

#### WAR ATTITUDES AND MILITARY TRAINING

As we noted above several studies grew out of an interest in the relationship between war attitudes and military training. Porter (30) was among the earliest to direct some attention to this matter. He found that 19 men taking military science during the time of testing showed a very small shift toward pacifism, and that 27 other men who had military science, but not during the period of testing, showed a very small shift toward militarism. He concluded that the kind of attitude held depended, among other things, on the policy of the ROTC staff members. The significant point about his observations is that all of the shifts in attitude that he observed were very small.

Rogers (31) submitted a list of 17 questions that dealt primarily with war and military training to students at 10 eastern colleges and universities. At six of these schools military science was an elective, and at the other four it was compulsory. Two-thirds of the students stated that no good is derived from war. At one institution, however, 14% of students in the advanced course stated that war serves a good in that it accelerates scientific progress. Even so, the percentage is relatively small.

Zubin and Gristle (35) and again Gristle (18) used students enrolled in military science courses and those not enrolled in such courses as a means of weighting the items in their militarism-pacifism scale. Jones and Jones (21) included the question, "military training should receive strong support in our colleges and high schools," and found that "the boys lagged behind the girls in approval of this proposition."

Droste and Seyfert (9) took a sample of the 1908-1936 graduates of a military academy and studied their attitudes and preferences. They report that less than one-ninth of their respondents showed any militarism, and that there is no evidence that military school graduates show any "abnormal appetite for military careers," nor that they select colleges that have military training. They also compared military school seniors with a corresponding group of non-military school students on the Droba scale and found a negligible difference between the mean scores of the two groups.

Dudycha (10) made a careful study under somewhat controlled

conditions of the attitudes of college men taking and not taking advanced courses in military science. Although all men students at Ripon College must take the basic work in military science, the advanced course is an elective. Hence a comparison of men taking and not taking the advanced course afforded an opportunity to compare the attitudes toward war of the two groups and to note evidence of indoctrination if there was any. Using the Peterson scale, he found differences between junior men taking and not taking the junior course, and between senior men taking and not taking the senior course that were statistically unreliable. He concludes that students "who take advanced courses in military science are about as likely to shift in the direction of greater pacifism as those who do not receive such instruction."

#### DISCUSSION AND CRITICISM

In an earlier section we noted the variety of methods used in the study of war attitudes. Questionnaires were used in the beginning followed very soon by the extensive use of more formal scales, particularly the Droba and Peterson scales constructed by the Thurstone technique. The fact that these scales have been used for the past ten years by a large number of investigators for testing groups of students in different types of schools and in all parts of the country gives us an opportunity to examine critically what has been discovered and what the future of this type of testing may be.

The seeming advantage of Thurstone's attitude scales is that with them a score is readily determined for each person whose attitude is measured, and from these individual scores means for groups can be found. All of the articles that used the Droba and Peterson scales report mean scores for the groups tested, and make comparisons on the basis of these means. All of these means indicate that both students and adults are, on the average, moderately opposed to war. This uniformity in results has led to some skepticism. Jones (23, 24), who has used the Droba scale longer than any other investigator reported here, observes that individual variability is large. Although a student's final score may be 6.7, he does not merely endorse those statements that have a scale value close to this average, but he may also endorse statements that are near *both* limits of the scale and that represent opposing attitudes. Jones contends that therefore the student's score does not give a complete picture of his attitude toward war. That this is not just an isolated case is evident from the fact that the average deviations

and sigmas are large for most groups. The present writer, who has given the Peterson scale to over 900 college students, has observed the same fact in his results and has been somewhat disturbed about it.

The Thurstone scales assume that the attitude measured is a single continuum and that the person's true attitude falls somewhere between the extremes of the scale. Jones, on the other hand, contends that we must substitute the theory of multiple continua—war attitude is not a single thing but a complex of attitudes. He further maintains that students may have attitudes toward specific issues that may change without changing their general attitude toward war. Fromme (16) in similar vein contends that there is no single attitude toward war but rather that the war attitude is a complex of attitudes.

Ericksen (13), having used the Peterson scale, also criticizes the use of such scales. He believes that the scales are not sensitive enough to changes in attitude; that the distributions obtained are skewed or bimodal, and that 1930 norms are inadequate for 1940-41 scale results.

That the study of war attitudes by social scientists is worth while is unquestioned, but whether the methods used are yielding the results we desire is questionable. Social changes and world events that markedly alter the thinking of people may be of such proportions that scales which once seemed useful may no longer be of value. This does not imply that all we can do is fall back on the simple questionnaire method, but rather that we should pioneer in new methods that transcend the inadequacies of the old. This may mean multiple-plane scales such as Jones and Fromme suggest, the interview procedure used by the Office of Public Opinion Research, or some as yet untried methods of measuring attitudes in actual life situations.

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# SPECIFICATION AND DESCRIPTION OF COLOR\*

## AMERICAN WAR STANDARD

Approved June 17, 1942

AMERICAN STANDARDS ASSOCIATION

### FOREWORD

For almost half a century, spectrophotometry has been the accepted method for the determination of those characteristics of an object which relate to its color. The National Bureau of Standards pioneered in this type of measurement and has continued its use as a primary method.

Color standardization and specification for technical purposes have been an accomplished fact for at least twenty years. The 1922 Report of the Colorimetry Committee of the Optical Society of America codified and published a standard procedure based on scientific investigations carried out by leading investigators in this and other countries since the middle of the nineteenth century. In 1931 the International Commission on Illumination adopted essentially the same procedure, with details modified on the basis of the most recent and reliable investigations, incorporating almost completely the recommendations of the National Bureau of Standards and the British National Physical Laboratory. This system has been widely published, elaborated for convenience in practical applications, and extensively used during the past decade in academic and industrial laboratories both here and abroad.

The chief criticism of this basic system of color specification has been due to its technical character, very little provision having been made for its interpretation in familiar terms. This limitation has been overcome in the present standardization by recognition of the correlation between the basic system and the useful and ready comprehensible system of colored samples embodied in the 1929 Munsell Book of Color. Reference to the Munsell Book of Color supplemented by the basic specifications of the colors exhibited therein, provides a convenient, readily comprehended interpretation of the basic specifications, and facilitates their visualization. This is especially important for those who are not familiar with the basic specifications of color. Used in this manner, the 1929 Mun-

\* This is published at the request of the Inter-Society Color Council, on the recommendation of the chairman of the A.P.A. representatives on the council with the permission of the American Standards Association.

sell Book of Color bridges the gap between the aesthetic and qualitative comprehension of color employed by artists, designers, and the general public, and the basic specifications employed by and necessary for the purposes of science and industry.

When a numerical specification of color is undesirable, the use of a correlated system of color names adapted from common language and proposed by the Inter-Society Color Council is recommended. This system of color names has been defined in terms of the Munsell system, and provides a literary method for the description of color where general comprehensibility is desired and precision is not important.

### 1. PURPOSE

To recognize and recommend a basic method for the specification of color, and to facilitate its popular interpretation.

### 2. PROVISIONS

2.1.\* The spectrophotometer shall be recognized as the basic instrument in the fundamental standardization of color (1).

NOTE: Specifications of the spatial distributions of the incident and collected light are essential to the standardization of spectrophotometry. Until standard conditions are established by agreement, the particular conditions employed in each instance should be stated clearly.

2.2.\* Color specifications computed from spectrophotometric data shall be found by means of the standard observer and co-ordinate system adopted in 1931 by the International Commission on Illumination (2, 3, 4).

In the absence of a special reason for adopting some other illuminant in reducing spectrophotometric data, standard ICI illuminant C, representative of average daylight, shall be used (2, 3, 4).

The basic specifications of color shall consist of the tristimulus value,  $Y$ , and the trichromatic coefficients,  $x$  and  $y$ , of the ICI co-ordinate system, or they shall consist of the tristimulus value,  $Y$ , and the dominant wavelength and purity (3, 4).

\* The alternative, but coordinated systems of color specification described in 2.1, 2.2, and 2.3 are each adequate for specification of color tolerance in those cases for which each system is useful and convenient. As in all engineering specifications, the tolerances in different industries vary and depend upon the uses for which the products are intended. Color specifications according to 2.2 and 2.3 are, strictly speaking, appropriate only for products viewed by normal vision, but in the absence of agreement on standards for anomalous color vision or vision at low illuminations no more appropriate color specifications are available.



NOTE: Dominant wavelength and purity are obtainable by computation (3, 4) from the trichromatic coefficients,  $x$  and  $y$ . Several methods of expressing purity have been proposed and used to some extent. In this standardization, purity refers to the quantity which is called excitation purity in discussions (4, 5, 6) of the several possible purity scales. For the sake of uniformity, the symbol,  $p$ , and expression in terms of per cent is recommended for purity. Likewise, when  $Y$  is specified in terms of reflection factor it should be expressed in per cent, symbol,  $R$ . It is customary to express dominant wavelength in millimicrons,  $\mu$ , and this practice is recommended, together with the symbol,  $\lambda$ .

2.3.\* For the popular identification of color, material standards may be used. The only system of material standards that has been calibrated in terms of the basic specification is represented by the 1929 edition of the Munsell Book of Color (7, 8). The use of this book is recommended wherever applicable to the specification of the color of surfaces. Approximate identifications of Munsell hue, value, and chroma may be secured by direct visual comparison with the samples in the 1929 Munsell Book of Color. When the most accurate visual comparisons are needed, the mask method (9) is recommended. Wherever more exact Munsell notations are desired, they shall be found from the basic specification,  $Y$ ,  $x$  and  $y$  by interpolation among the smoothed curves (10, 11) for Munsell hue, value, and chroma.

NOTE: Most surfaces whose colors fall outside the range covered by the samples of the 1929 Munsell Book of Color cannot be assigned Munsell notations by reference to the smoothed curves. For such surfaces, for transparent media, and for illuminants, only the basic specification  $Y$ ,  $x$  and  $y$ , or  $Y$ , dominant wavelength and purity are recommended.

2.4. A descriptive name according to the ISCC-NBS system of color designation (9, 12) may be derived from the Munsell notation. This name is recommended wherever general comprehensibility is desired and precision is not important. The use of color names for color specification is not recommended.

NOTE: It should be emphasized that the ISCC-NBS names are descriptive only and are not adapted to sales promotion nor intended to replace names that are developed for that purpose.

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## PSYCHOLOGY AND THE WAR

Edited by

STEUART HENDERSON BRITT

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## PSYCHOLOGISTS AND THE ARMY SPECIALIST CORPS\*

BY DONALD E. BAIER

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The rapid expansion of the Armed Forces at a time when demands on the manpower of the nation are very great has made it necessary to induct into the Army men whose response to training will be slower than that which has characterized the highly selected group already bearing arms. Consequently it is desirable to have appropriately trained professionals available in the Army to advise on the selection, classification, and assignment of such personnel.

The greater part of the Army's need for psychologists is divided between the field forces and the zone of interior installations. Psychologists serving with the field forces are selected from officers and from enlisted men who have already completed basic military training in the Army. Psychologists employed in the zone of the interior, on the other hand, are recruited from that part of the male civilian population which is regarded as less suited for field duty because of physical limitations or dependency. These men are commissioned in the Army Specialist Corps and are assigned to two principal types of duty.

One of these occurs in Army recruiting and induction stations where technical assistance is needed in selecting those men who are capable of being trained rapidly in the duties of a soldier. The requirement that those accepted for induction possess fourth grade literacy in English has been removed and effective August 1, 1942,

\* The Army Specialist Corps has been discontinued, but the substance of what follows remains applicable to the Army of the United States save that the standards of eligibility to be met by either Army Specialist Corps officers or civilians have been revised as follows:

- a. If under age thirty-five, prior commissioned service or classification as IV-F is required.
- b. If age thirty-five to forty-five, prior commissioned service or classification other than I-A or II is required.

Exceptions may be made only where there is critical need for the services of a particular individual or where the individual is within a scarce category of specialized skill in which not enough trained men to fill the requirements of the armed forces are available at the time required.

"Any registrant who is able to understand simple orders in English and who possesses sufficient intelligence to absorb military training rapidly is eligible for induction into the military service." However, "The number unable to read and write English in a fourth grade standard who are accepted for induction on any day at any recruiting and induction station will not exceed ten per cent of the white and ten per cent of the colored registrants." (War Department Circular No. 169, June 1, 1942.) Also, provisions were made for selecting and inducting the more readily trainable non-English speaking men.

Group and individual mental tests and other screening techniques were prepared in order to standardize and objectify the procedures used in carrying out the above directives. In order to insure maximum efficiency for these procedures the procurement of approximately 186 psychologists to be commissioned in the Army Specialist Corps, half as First Lieutenants and half as Second Lieutenants, was authorized. To be eligible for a commission, an applicant had to be either:

- a. between the ages of thirty and forty-five and have a Selective Service Classification other than I A, I B, II A, II B,\* or
- b. under thirty years and have a Selective Service Classification of IV F, or
- c. over forty-five years.

To qualify for a commission as First Lieutenant, the applicant was required to possess a Ph.D. degree in psychology or have completed one year of graduate training in psychology, supplemented by practical experience in psychological examining. To qualify as Second Lieutenant, the applicant must have completed a major in psychology at an accredited college or university—plus some post-graduate work or clinical experience in psychological examining. In addition, the applicant was required to demonstrate his physical fitness by passing an officer's final type physical examination. The physical requirements of the job were considered in granting waivers for certain defects.

All applications were first reviewed for eligibility and professional qualifications by a three-man board consisting of three professional psychologists.† Applicants were rated by each of the members, first in respect to suitability for commissioning as First or Second Lieutenant. This dichotomy was based not only on the

\* This was the final decision for this age group.

† The writer served as secretary to this board.

amount of training and relevant experience but also on age and achievement as reflected in professional status and earnings. The applications in each group were then rated on a four-point scale according to the degree of confidence with which the rater recommended the applicant. A sufficient number of those receiving the higher ratings for First Lieutenant and for Second Lieutenant were authorized to take physical examinations, to forward certificates showing Selective Service Classification, and to sign waivers of government responsibility for physical defects where indicated. Those already employed by the Federal Government were also required to obtain and forward official releases from their current positions.

The applications which survived these steps were then forwarded to a final administrative selection board and commissioning authority which was entirely independent of the preliminary and professional selection authority.

The applicant population included a majority of Ph.D's in psychology, most of whom had a good deal of experience in clinical psychology, vocational psychology, personnel, and allied fields. On this account many of those recommended for commissioning as Second Lieutenants possessed formal qualifications making them eligible for commissioning as First Lieutenants. Recommendation for the senior rank therefore meant that the applicant's qualifications placed him within the upper half of the recommended applicant population.

Those psychologists commissioned as First Lieutenants bear the principal responsibility for

- (1) selecting from the processing line in the Induction Station those men whose suitability for induction is in doubt;
- (2) supervising the testing of these men and the interpreting of their test scores in relation to other data in order to arrive at a determination as to which are acceptable for induction, and which are unacceptable;
- (3) forwarding to the Reception Centers the findings on the men accepted for induction to assist in their initial classification and assignment in the Army.

The Second Lieutenants are responsible to the First Lieutenants who see that they carry out those parts of the screening procedure to which they are assigned. Both officers assist in the collection of data from which the validity of the screening tests and procedures may be determined and on the basis of which revisions and improvements are being made.

Most of the psychologists commissioned in the Army Specialist Corps to carry out the Induction Station screening procedures were instructed in the fundamentals necessary to their effective functioning in the Army as officers, as well as in the problems attendant upon carrying out their special tasks. This instruction was given in a special ten-day school which began October 11 at Fort Leavenworth, Kansas, and included experience on the job in an Induction Station and in a Reception Center. Those who were not commissioned in time to attend this school have been given similar training by their Service Command personnel consultant who is the Army officer charged with the supervision of the program in each of the nine Service Commands.

The other type of duty for which psychologists were commissioned in the Army Specialist Corps occurs in Replacement Training Centers and other installations in the zone of the interior. Specially selected Army officers, known as personnel consultants, have been assigned to these installations to advise classification officers and others responsible for personnel management, in regard to general policies and to the problems of the atypical soldier especially as they relate to his classification, training and assignment. In order to release these men for similar duties with the field forces, an additional fifty psychologists, selected in the manner described above, were commissioned as First Lieutenants in the Army Specialist Corps. The functions of these men vary with the different training programs and problems existing in the various installations and with their individual competencies.

In these ways psychologists have been given an excellent opportunity to contribute to the fabrication and maintenance of a fighting organization.



## SOME SUGGESTIONS FOR PSYCHOLOGISTS

BY GARDNER MURPHY

*College of the City of New York*

The editor of this section has asked me to prepare a brief statement on the contributions which can be made toward the war effort by those psychologists who are not in the armed forces or employed elsewhere in government service. Such suggestions must be woefully incomplete; but this preliminary statement may arouse discussion, clarification, and supplementary publication by others so as to give a more rounded picture.

1. A large amount of war research is being carried on privately in universities, colleges, and clinics. There are, for example, studies of oxygen deprivation and of the curve of work which, in confidentially circulated form, appear to interest the Army and Navy. There are many psychological studies done through local ROTC units, having to do with the qualities of leaders and with methods of leadership training, which by achieving local success may lead to gradual broadening and recognition of the value of such private research. With regard to all such research directly bearing on the efficiency of the armed services, it is important that the contributor send an outline of his project to the Office of Psychological Personnel, to receive suggestions as to which military or civilian authority might most appropriately make use of it, distribute it, or suggest a contractual form in which it should be prepared.

2. The government public-opinion services are being facilitated in a large way by private opinion-polling services, both of the commercial type and of various non-commercial university types. In numerous instances in the last few months, university opinion-polling agencies have been able to do quick and effective sampling of regional opinion distribution, or have been able to try out rapidly a hypothesis which would take a good deal of time to test through the normal production flow of any of the government opinion-polling agencies. No psychologist need be apologetic for his small sample or his crude methods. The Division of Program Surveys of the Bureau of Agricultural Economics, United States Department of Agriculture, informs me that private attitude studies, whether to supplement government samples or as "pilot studies" in preparation for larger government investigations, are of very great importance to the war effort.

3. Psychologists as educators and as participants in campus

war-time activities can do a great deal to point out efficient methods of experimenting on the curriculum to give it the best relation to the present educational task. Being relatively free from the pressure of sheer tradition on the one hand, and from the impetuous desire to pull the curriculum apart on the other hand, psychologists can give a research orientation, a fact-finding slant, to the curricular revision which is already under way.

4. Psychologists are hardly aware of the fact that the social agencies which rely so heavily upon psychology and psychiatry are at present in the most *desperate* need of more part-time and voluntary psychological service. Professional case loads of social workers, vocational guides, etc., are mounting at the very time when personnel is dwindling. The psychological damage to the community, especially to children, is already alarming, with neglect and delinquency as the grosser evidences, and in a year or two more is likely to be catastrophic. The bridge has not yet been constructed between the tremendous need on the one hand, and the large number of qualified psychologists eager to help on the other hand. Psychologists with some clinical training can find out in their own communities how they can help carry this burden. In long-range mental hygiene and morale terms, nothing is more important.

5. Basic attitudes towards the post-war world can be intensively studied through collaboration with sociologists, psychiatrists, and social workers, region by region, community by community, class by class. The Washington agencies are by no means inclined to the view that long-range post-war thinking interferes with the prosecution of the war. On the contrary, psychologists seem to be doing much less post-war thinking than is the government itself. Such thinking and research, at a high level of seriousness and realism, constitute a major opportunity for those psychologists who, in close touch with the course of world events and the Washington situation, will help to gather data to give a factual basis for an enduring and humane peace.

## OCCUPATIONAL DEFERMENT OF PSYCHOLOGISTS AND PSYCHOLOGISTS IN TRAINING

BY STEUART HENDERSON BRITT

*Office of Psychological Personnel, National Research Council*

The expanding needs of our Army, together with public statements issued by various officials, have resulted in a very critical situation with respect to occupational deferment of psychologists, graduate students of psychology, and undergraduate majors in psychology. The following material has been prepared in order to give factual information to psychologists and employers of psychologists regarding the exact steps to be taken in connection with claims for occupational deferment.

The ever increasing demands on Local Boards make it important that these Boards receive the wholehearted cooperation of every psychologist and psychologist-in-training to the end that every individual may be engaged in the capacity in which he will most effectively serve the war effort. This responsibility for seeing that the most effective use is made of psychologists and that a continuing supply of psychologists is assured rests *jointly* with (1) the Local Board, (2) the individual concerned, and (3) his employer. The members of a Local Board can be expected to act intelligently only when they are given the *complete* background of the case and when they have confidence in the sincerity of the motives underlying the request for occupational deferment.

### POLICY

In the last analysis the only basis for requesting or for granting occupational deferment must be whether the war effort is best served thereby. Deferment problems must be presented to and dealt with by Local Boards on this basis. Since requests and memoranda cannot cover all possible cases, it is the obligation of both the employer and the registrant not only to consider a case in terms of this broader basis but also to supply to the members of the Local Boards a type of information which will direct their attention to this same principle. A proper policy for psychologists to follow in requesting deferment might contain the following points:

- (1) Ask for deferment only in cases where this is justified by an immediate or potential contribution to the war effort, and in which the registrant or his employer is prepared to appeal to the highest authorities.
- (2) Be willing to give time and attention to each case to insure that

Local Boards are made fully aware of the facts both as to the general situation in psychology and the particular circumstances of each case.

(3) Proceed on the assumption that Local Boards are capable of making intelligent decisions when they have full information brought to their attention. Full information means not only the bare facts but also an explanation of the significance of these facts in relation to the war effort as a whole and to the particular phase of war work with which the registrant and his employer are concerned. (For example, it is not adequate simply to make the blanket assertion that "it is well known that graduate assistants or instructors cannot be replaced"—explanations and supporting evidence are needed. Merely to state that a man is a "psychology teacher" is not enough—a statement of how and why such work is important would be of much more assistance to the Local Board.)

(4) Having requested deferment on defensible grounds, exert every effort to secure that deferment, including the taking of appeals.

(5) Be prepared to work under Selective Service procedures *as they are* (rather than as one thinks they should be) and become familiar with Local Board personnel and attitudes. The presentation of a case for deferment resembles in some ways the presentation of a legal case, and many of the same factors are involved.

*It cannot be too strongly emphasized that the successful handling of deferment cases depends primarily on intelligent, cooperative action on the part of the registrant, his employer, and the Local Board concerned.*

The general criteria on which Local Boards base their decisions regarding occupational deferment are presented in considerable detail in Memorandum to State Directors I-405 (Local Board Release 115 amended by Local Board Releases 122 and 137). To be considered for occupational deferment, the registrant must be a "necessary man" (or a "necessary man in training and preparation") in an activity either supporting the war effort or necessary to war production. The registrant must meet the following tests in order to be classified as a "necessary man":

1. He must be engaged in a "critical occupation" in an activity necessary to war production—or essential to the support of the war effort.
2. He cannot be replaced because of a shortage of persons with his qualifications or skill.
3. His removal would cause a serious loss of effectiveness in such activity.

Psychologists are listed in Selective Service Occupational Bulletin No. 10, June 18, 1942, as falling within a "critical occupation" generally, and the shortage of psychologists is certified to in this same Bulletin (see *Psychological Bulletin*, 1942, 39, 525-528). "Educational services" are stated to be an essential activity in



Memorandum to all State Directors I-435, July 15, 1942 (see *Psychological Bulletin*, 1942, 39, 670).

#### PROCEDURE

The following procedures are suggested in view of the policy and general principles described above:

(1) *Persons not yet classified.* Form 42 or Form 42-A should be submitted by the employer or institution requesting deferment. This should be prepared for anyone for whom occupational deferment is contemplated and should be submitted *immediately* after the person concerned has received his Selective Service questionnaire. This form should be accompanied by supplementary material. With some Boards it may be advisable to present all or part of this material in affidavit form. It should include:

a. Excerpts and quotations from authoritative sources regarding the part psychology and psychological training are playing in the war effort.

b. Material showing exactly why the person concerned is important to the war effort in his present position and how he is contributing to the war effort.

c. Material showing specifically why it would be difficult or impossible to replace the registrant in his present duties and what efforts if any have been made to replace him.

(2) *Psychologists in II-A or II-B.* Deferments in II-A or II-B are generally for a period of months only, and each case must be reconsidered by the Local Board at the expiration of this period. The chances of obtaining continued deferment will be greatly increased if it can be shown that a conscientious effort has been made to replace the registrant and that this effort has failed. From the point of view of the Local Board, it probably will not be sufficient for the employer simply to state that he has made an effort to replace the man and has not succeeded. Specific evidence must be supplied to support any such contention. As a result of personal experience, heads of Psychology Departments realize the difficulty of replacing anyone trained in psychology, but Local Boards are completely unfamiliar with this situation and have a perfect right to expect a statement to this effect to be backed up by concrete evidence. Such evidence might include sample copies of letters of inquiry concerning men to replace the registrant, replies received, etc.

(3) *Psychologists now classified III-A.* In view of the probable reclassification of men with dependents, it is highly desirable to

have in the hands of Local Boards information which will permit the reclassification of III-A registrants into III-B ("persons with one or more dependents who are engaged in an activity either essential to the war production program or essential to the support of the war"). Material similar to that indicated above, including Form 42-A, should be submitted together with a request for reclassification into III-B.

(4) *Psychologists classified I-A.* Immediately upon receipt of notice of classification, a written request for reconsideration by the Local Board should be made. This request should be in such a form as also to constitute an appeal to the Board of Appeal in the event that the Local Board's reconsideration does not result in a satisfactory reclassification.

If the material listed under (1) above has not previously been supplied, it should be placed in the hands of the Local Board at once together with the best possible explanation of why this has not been done previously. Submission of a request for occupational deferment *after* a I-A classification has been given will probably suggest to a Local Board either negligence or a lack of sincerity in the request. This situation must rightly be clarified before any consideration can be given to such a request.

If incomplete information (Form 42-A only, for example) has been submitted, this should be rectified at once and a request should be made for reconsideration in the light of the new information. Again an explanation of why this material was not previously submitted is due the Local Board.

If all possible information has already been submitted to the Board, a request for reconsideration or at least for a discussion of the case should be made. A discussion of the case will at least give an opportunity to ascertain the attitudes of the Board members. Failure to grasp the significance of the situation, or personal factors, may be found to have influenced their decision. All such information may properly be used in carrying an appeal to the Board of Appeal.

#### APPEAL

If it becomes apparent that the end of negotiations with the Local Board has been reached without having modified the registrant's I-A classification, the appeal to the Board of Appeal should be carried through. *Such an appeal must be made within 10 days of the date when the Local Board mailed to the registrant a notice of classification.* This appeal should previously have been instigated either

by filing a written request with the Local Board, or by filling in and signing the Appeal to Board of Appeal request on page 8 of the Selective Service Questionnaire. This may be done by the registrant, by his employer, or by the Government Appeal Agent. Consultation with the Government Appeal Agent may be desirable at this point. He may be reached through the Local Board or through the State Director of Selective Service. The following information taken from the Regulations of the Selective Service System indicates the proper appeal procedure in greater detail:

Memorandum I-398 of March 9, 1942, set up a procedure whereby a Local Board, which refuses a II-A or II-B classification to a man whose deferment has been requested by his employer or college on occupational grounds, is required to send a notice of the employer's right to appeal to the company or institution requesting deferment.

Parts 627 and 628 of the Selective Service Regulations deal with appeals, the former having to do with Appeal to the Board of Appeal, and the latter with Appeal to the President. Since this last case may be instigated only by State Directors or on dependency ground, it is not of great concern here.

An Appeal to the Board of Appeal may be instigated by (1) the State or National Director of Selective Service, (2) the registrant, (3) any person who claims to be a dependent of the registrant, (4) any person who has filed written evidence of the occupational necessity of the registrant, or (5) the Government Appeal Agent. Such appeal must be instituted within 10 days of the time the local board mails to the registrant a notice of classification. (The Government Appeal Agent may, however, take an appeal at any time prior to the time an order to report for induction is mailed to the registrant.) An extension of time (up to the time an order to report for induction is sent out) may be granted by the Local Board if it is satisfied that failure to appeal within the 10-day period was due to lack of understanding of the right to appeal, or to circumstances beyond the control of the person making the appeal.

Any person entitled to do so may appeal (1) by filing with the Local Board a written notice of appeal, or (2) by signing the "Appeal to Board of Appeal" on the Selective Service Questionnaire. The person appealing may attach to his notice of appeal a statement specifying the respects in which he believes the Local Board erred, may call attention to pertinent information in the registrant's file, and may set out in full any additional pertinent information which the Local Board failed or refused to include in the applicant's file.

The Board of Appeal, having taken action, will direct the Local Board to mail to the registrant either a notice of continuance of classification or a new notice of classification depending on its decision. The Local Board may not issue an order to report for induction either during the period afforded the registrant to make an appeal or during the time such an appeal is pending. Any such order, already issued, shall be ineffective and shall be canceled by the Local Board.

NATIONAL ROSTER OF SCIENTIFIC AND  
SPECIALIZED PERSONNEL

Some of the activities of the National Roster of Scientific and Specialized Personnel with reference to the possible occupational classification of professionally trained registrants has been mentioned in earlier issues of the *Psychological Bulletin* (April, 1942, 39, 257-260; November, 1942, 39, 773-793). The following is a more detailed statement of the ways in which the National Roster may be able to assist with reference to the proper classification of psychologists.

Any psychologist who has not already done so should register immediately with the National Roster. This may be done by writing a letter to the National Roster of Scientific and Specialized Personnel, 10th & U Streets, N.W., Washington, D. C., and asking for appropriate forms in psychology. In this communication, the writer should indicate whether he is subject to the Selective Training and Service Act of 1940.

Undergraduate majors in psychology will automatically have an opportunity to register with the Roster during the academic year, when special student questionnaires for technically trained students are sent at periodic intervals to the registrars of their colleges and universities. However, the National Roster can take no action whatsoever regarding the Selective Service status of any undergraduate student.

On the other hand, the National Roster may take appropriate action in the case of professional psychologists and graduate students in psychology. Under a cooperative plan with the Selective Service System, the Roster may send to the National Headquarters of the Selective Service System appropriate information about professionally trained men of military age, and that office in turn may then forward letters about these men through the various State Directors to the individual Local Boards in order to assist in proper classification. Because the National Roster was organized prior to the beginning of the Selective Service System, it is obvious that detailed information on a man's Selective Service status is not necessarily a part of his Roster questionnaire. Therefore, even though a psychologist has at some time in the past registered with the National Roster, he should write to the Roster for a special Selective Service questionnaire in case he has not already received one.



It is essential that a man (or his employing institution) should *not* wait until he is placed in Class I-A before writing to the Roster. Instead, detailed information regarding his Selective Service status and duties in his employment should be sent to the Roster at the earliest possible date.

In case a man is placed in Class II-A or II-B and that classification is about to expire, he should notify the Roster to this effect at least some weeks in advance. Also, he should notify the Roster at once of any change in employment or in duties performed in his present employment.

#### OFFICE OF PSYCHOLOGICAL PERSONNEL

Because of its semi-official nature, the Office of Psychological Personnel may in some instances perform functions which a government agency may not properly perform. Its primary purpose is to assist in every possible way in securing the effective use of psychologists in the war effort and in insuring a continuing supply of trained psychologists. Since the National Roster of Scientific and Specialized Personnel, 10th & U Streets, N.W., and the Office of Psychological Personnel, 2101 Constitution Avenue, Washington, D. C., are geographically separate, and are concerned with different problems, every psychologist should notify *both offices* of any change in either his *employment* or *Selective Service* status. Information sent should include: (1) *full* name of registrant, (2) mailing address, (3) Selective Service order number, (4) name or number of Local Board, (5) full address of Local Board, and (6) *specific* description of present employment or research, especially as related to the war effort.

## PSYCHOLOGY AND THE WAR: NOTES

*Filing of Information on "Necessary Men."* The following material appeared in *Selective Service*, September 1942, II, 1 and 3:

Issuance of a simplified Form 42-A and revised Form 42 designed to greatly assist employers in their application for deferment of "necessary men" and to lessen the "paper work" of local boards when considering occupational classifications, has been announced by National Selective Service Headquarters.

With the issuance of these revised forms, National Headquarters urges that employers be advised to use them in connection with all "key men" among their workers, regardless of whether or not these registrants have been deferred for other reasons.

The filing of the information required by the forms is particularly advisable, it was pointed out, in connection with a "necessary man" who has been deferred for dependency in Class III-A or Class III-B because it would help to prevent possibility of his induction, when those categories are being considered for military service, without the employer having had opportunity to present evidence of the man's necessity to him. Furthermore, the filing of application for the deferment of an employee gives the employer a right to appeal a change in the employee's classification.

The Form 42-A, on which industrial employers make application for deferment of necessary men, has been reduced from a four-page to a two-page document, although all questions necessary for the submission of pertinent information have been retained.

Revised Form 42 is for use by employers other than industrial and is in the form of an affidavit. Agricultural employers, in particular, may use this Form 42 in addition to any agricultural forms from other agencies intended to show the necessity of an individual registrant.

Questions relating to students, previously included on the Form 42-A, have been eliminated, and in the future colleges and others applying for the occupational classification of students should use Form 42. The American Council of Education Form 10 should be attached to Form 42.

Filing of either form by a proper person, other than the registrant, entitles the person who filed to take an appeal from local board action when he believes the registrant has been improperly classified.

*Needs of Army for Technically Trained Men.* According to *Science* magazine of October 2, 1942, the Honorable Henry L. Stimson, Secretary of War, issued a statement on September 17, part of which is reproduced below:

The Army is greatly in need of men of specialized training, particularly in physics, chemistry, engineering and medicine. We are equally interested in having adequate numbers of men of such training available to war production industries and the civilian research agencies of the government. Plans are now being worked out for the method of training of those inducted into the Army, but in any event it is hoped that the colleges will maintain their training of students in engineering, medicine and other sciences. In some cases, it will be necessary to expand this

training. Occupational Bulletins of the Selective Service System have been issued from time to time which relate to college students in these fields essential to the war effort. I now re-emphasize the fact that where students in these fields and their teachers fall within the classifications for deferment by the provisions of these bulletins they are doing the job their country wants them to do and are performing their full duty in the war effort.

Although psychology is not specifically mentioned in this statement, this paragraph may be useful to some psychologists in bringing to the attention of Selective Service Local Boards the need for continued training of many students in the scientific and technical fields. It should be noted that Mr. Stimson calls especial attention to Occupational Bulletins of the Selective Service System.

*How the Army Sorts Its Man Power.* Psychologists are undoubtedly often asked to describe various aspects of the classification program of the Army. A scholarly article on "The Army Personnel Classification System" was published by Dr. Walter V. Bingham in *The Annals of The American Academy of Political and Social Science*, March, 1942, 220, 18-28. The same problem is also discussed in more popular style by Walter V. Bingham with James Rorty under the title "How the Army Sorts Its Man Power," in *Harper's Magazine*, September, 1942, 185, 432-440; this has also been reproduced in the *Infantry Journal*, October, 1942, 51, 22-30.

*Monthly News Letter from Psychological Abstracts.* The Office of War Information has asked *Psychological Abstracts* to prepare a monthly News Letter embodying reports of psychological research done in the United States. These letters, of which four have been issued, are translated and distributed through facilities of the Department of State to sixteen countries outside the Western Hemisphere. Each letter begins as follows:

PSYCHOLOGY NEWS LETTER FOR TEACHERS AND STUDENTS OF PSYCHOLOGY,  
PSYCHIATRISTS, NEUROLOGISTS, EXPERIMENTERS IN PSYCHOLOGICAL LABORATORIES AND WORKERS IN ALLIED FIELDS

Dear Sir:

The war has disrupted the world-wide exchange of information on progress in all fields of science. Research does continue, however, and to keep you informed of the work being done today in the United States in the field of psychology, this communication summarizing recent research has been prepared by the American Psychological Association. It is distributed by the Department of State of the United States Government and more copies can be secured at any Legation or Embassy of the United States. A similar communication will reach you once a month.

## BOOK REVIEWS

ANGYAL, ANDRAS. *Foundations for a science of personality*. New York: The Commonwealth Fund, 1941. Pp. xii + 398.

The general purpose of this study is to present in a rather extensive outline form the basic principles necessary for the formulation of a science of personality. By personality, Angyal means the dynamic process of living which, in the case of man, includes all those factors which bind him into superindividual relationships. Assuming that man is more than a mere concatenation of physiological, psychological, and social functions, the author argues that what is needed is not a combination of the results of the segmental sciences (the sciences which study isolated aspects of a person) but rather an entirely new science. Fully utilizing his background as a psychiatrist and biologist, Dr. Angyal attempts to formulate such a new science by bringing together the various sciences of man into a unified, holistic system.

Pointing out that life must be viewed as a unified whole, he sets out to discover the leading principle according to which it is organized. Justifiably arguing that so many current theories of life are immanent—that "the part processes have the function to maintain life; and life is an aggregation of these part processes"—Angyal escapes this "biological nihilism" by positing extra-organismic happenings such as assimilation and production, both of which escape the closed circle and when synthesized can be roughly defined as a process of self-expansion. This process of self-expansion does not take place within the organism but between the organism and its environment. For Angyal the organism and the environment are not discrete entities but two indispensable poles of a single unitary process namely life.

This life process is delineated in two ways: first, by a tendency toward increased autonomy (self-government and control over the environment) and secondly, by a tendency toward homonomy (conformity with such superindividual wholes as the family, society, culture, etc.). The life process takes place in a unified whole which he calls the biosphere. "The biosphere includes both the individual and the environment, not as interacting parts, not as constituents which have independent existence, but as aspects of a single reality which can be separated only by abstraction."

The general dynamic pattern (autonomy and homonomy) of the organism has specific channels of expression, which when carried to the extreme become observable aspects of behavior. "The specific ramifications of the general dynamic trends form the skeleton of the personality structure." Because of the high degree of individuality of these specific ramifications, Angyal deals more intensively with their roots—that is with their more general expressions. Thus for example, the author posits three basic dimensions in which the various personality manifestations are arranged: the vertical dimension, the dimension of progression, and the transverse dimension. The first of these represents the development from general trends to superficial concretization of specific aspects of behavior. The second represents the development of a "means-end organization," whereby specific cravings, etc. are realized. The third dimension is one of

breadth, in which there is a "synergetic organization or coordination" of the various surface tendencies of the organism.

The different specific manifestations of personality, such as the trends toward autonomy and homonomy, basic cravings, drives, wishes, etc., are all integrated into a unified system. It is with regard to the system principle that Dr. Angyal makes his most valuable contribution to psychology and psychiatry, for it is in the disturbances of system integration that the basic abnormal personality manifestations have their etiology. Preferring the term "bionegativity" to "abnormal," Angyal points out that the "bionegative constellations" have two components which must be separated if one is to get a clear picture of a given (mental) disturbance. One to distinguish between symptoms caused by the introduction of a traumatic agent (causal) and those produced by the organism's reaction to the trauma (organismic reactions).

Throughout the book the author has attempted to maintain a neutral attitude toward the various scientific disciplines. Of especial interest to psychologists is the differentiation he makes between psychophysically neutral processes and psychological experientialism, such as the difference between biological tension and interests, drive and craving, etc. There is considerable emphasis upon the analogies between his postulations and those of psychoanalysis, which is understandable in view of his psychiatric background. A great many of his ideas appear to be adaptations from Stern's Personalistics. It seems peculiar to this reviewer that no mention is made of the Gestalt concept of isomorphism since it seems to be quite similar to his concept of the biosphere.

On the whole, he has presented a valuable synthesis of many hitherto divergent views along with many new theoretical concepts. The book is well written, being singularly free of errors. Each chapter is well summarized saving the reader needless back-tracking. It can be heartily recommended to those psychologists who profess an interest in the theoretical setting of their discipline, although it was not written primarily for any one group of specialists. Although the book is not very well documented with experimental evidence, such an omission does not constitute a valid criticism since it was prepared solely as a theoretical outline. In all, Dr. Angyal has carried out his stated purpose admirably.

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*Clark University.*

DOCKERAY, F. C. *Psychology* (revised). New York: Prentice-Hall, 1942. Pp. xiv + 514.

In revising his text-book after a seven year interval, Dockeray has evidently been influenced by several considerations. One of these indicated in the preface, is "the increasing demand that the first course in psychology be made functional in the life of the student." Though he intends to go part way toward meeting that demand, he still believes the first aim of a text should be "to help the student understand human behavior." To make the immediate application of psychology more apparent to the student, Dockeray has changed somewhat the emphasis accorded various topics in his earlier edition. The most important addi-



tions however seem to be a good number of illustrative anecdotes and the inclusion of a quantity of practical advice, which sometimes verges upon direct exhortation. In the chapter on personality, for example, the reader is urged thus: "Get acquainted with your fellow students; make friends.—Take your college experience, therefore, as an opportunity for you to practice getting along well with people.—But when you have discovered your shortcomings, *do* something about it. We would almost be justified in saying *do anything*."

It is surely commendable for an author to give substance to the abstractions of a science by referring to the reader's experience. Yet there are dangers to be met in the endeavor. The extensive use of anecdote may lead the reader, as Dockeray suggests, into a too facile psychologizing. Advice has its special perils, for psychology is hardly a normative science, and any venture into the imperative mood presumes some ethical predilection of the writer. Like most psychologists Dockeray evidently considers the ethical basis of choice outside his proper field of discussion. Yet it may be argued that the reader who is being advised ought to be told in clear words what kind of man the psychologist desires to make him.

In my mind there lurks a suspicion that the purpose of interesting students by pointing the moral may widely miscarry. Both normal and "maladjusted" persons so frequently resent even requested advice that they might form a distaste for a book containing much of it. A disinterested consideration of alternatives and their consequences might, in fact, accomplish the purpose better.

Yet it is hardly fair to emphasize so much this aspect of Dockeray's book, when he has but used for flavoring, what some make a main dish. Other important reasons for Dockeray's revision were evidently his wish to include recent experimental material and to bring the work abreast of changes in his own thinking. The book is rich in accounts of experimental methods and results. These actually constitute the principal focus of attention, if not the bulk of the work. Examination of the dates in the footnote references shows about a dozen more recent than the previous edition of the book.

As one would expect the framework of psychological doctrine is not greatly changed in the new book. It is such as will appeal to most American psychologists as sound and substantial. It is a simple tough-minded psychology with a preference for "objectivity" and no great elaboration of fine distinctions. On the whole, it is probably a good representation of contemporary American psychology, and a reader would develop from it the outlook which is desired in the usual course in psychology. There are, of course, certain doctrines which would be disputed by many. It may be judged from a remark in the preface for example, that Dockeray feels himself on rather thin ice when he describes the behavior of genes for musical talent.

Certain changes which have been made in organization, emphasis and terminology are interesting in their suggestion of a trend in the science. There is still a section on "biological background" (restricted now to genetics) but far less is made of it than before. The concept of stimulus-response and reflex action which was extensively treated earlier, now re-

ceives little specific attention, and conditioning, likewise important before, now gets only two pages (though both are treated by implication elsewhere). Though emotion is still treated as "disorganized behavior" much less is made of the terms organized and disorganized behavior than before. "Attention" now replaces "Efficiency of Organization" as a chapter heading. "Perceiving" is used in place of "Sensory Discrimination." There changes may represent the waning of Weiss's influence upon Dockerau or a more general trend toward conformity to psychological tradition.

At the end of the book there is an extensive list of varied questions on each chapter which ought to be useful to the student trying to understand the subject.

R. C. DAVIS.

*Indiana University.*

GATES, ARTHUR I., JERSILD, ARTHUR T., MCCONNELL, T. R., & CHALLMAN, ROBERT C. *Educational psychology*. New York: Macmillan, 1942. Pp. xviii + 805.

This text was originally designed as the third edition of Gates' *Psychology for Students of Education* but actually represents an almost wholly new content. As an example of coöperative writing, it is to be commended for the integration of the various sections and the smoothness of its style. The authors' avowed purpose, "to produce a text in which personal bias is reduced to a minimum," is achieved without the monotony which such efforts sometimes produce. Another objective, "that the most important problems of education should be brought forward and grappled with in the light of the findings of educational psychology even if the data were not as yet very extensive," is adequately realized, though some might question the authors' selection of "the most important problems." In the discussions of relatively unworked fields, there are not many suggestions for needed research, which might well be expected. However, it must be admitted that this book is designed expressly for students preparing for the teaching profession, not necessarily for educational or psychological research. Finally, the authors have attempted to present "a candid statement and critical evaluation of available information." Although discussions are quite well documented, the references, collected at the ends of chapters, are indicated in the text by such small type numbers (6 point) that their effect is minimized. Instructors who wish their students to become aware of sources may find this a problem since the reader's tendency is to overlook the citations made in the text.

In developing their objectives, the authors state they are careful "to avoid exaggerating the practical values of the psychologist's devices, such as personality or intelligence tests." However, they mention numerous such measures throughout the text and reproduce sample items freely but include only very brief discussions of the shortcomings and the limits of usefulness of the devices. For example, the characteristics of good tests are dismissed in two paragraphs; validity and reliability are treated in less than four pages of very general discussion. While a minimal emphasis

on the values of tests may be in keeping with recent trends in the teaching of educational psychology, the widespread use of published measures of all sorts would indicate a need for adequate treatment of their limitations.

The authors hold that various "schools" of psychology are coming closer together and add: "The present book, it is hoped, includes facts, principles, and applications in a form acceptable to persons with preferences for any one of the major systems. Certain distinctions among theories will be considered in particular contexts which provide especially clear and useful illustrations. Thus something of the flavor of different points of view will appear without an effort to develop a complete systematic presentation" (13). Although this statement acknowledges a condition which will definitely annoy those who seek consistency of terminology or adherence to a single set of descriptive or "explanatory" principles, on the other hand, the eclecticism which it represents may be quite desirable for the practical ends to which this book is turned.

Chapters II through VIII by Dr. Jersild present a summary of the material on child development found in any good modern text on child psychology, such as Dr. Jersild's own book in that field. The seven chapters on learning and problem solving by Dr. McConnell avoid taking any consistent theoretical position except to reiterate that learning is a self-active process, most effectively carried forward with materials which are meaningful in terms of the learner's own experiences. Something more than the usual amount of material on thought processes is included. The chapter on meaning is novel to educational psychology texts and presents a clear logical exposition of the problem, recognizing that little has been done by way of its psychological solution.

Chapters XVI and XVII by Dr. Gates discuss tests and measurements, giving considerable attention to the recent educational concept of *evaluation*. Discussions of many forms of tests and test items, kinds of scores, types of standard tests now available, the significance of norms, and rules and suggestions for teacher-made tests are illustrated with an example in most cases. Possibly the brevity of this section is explained by the authors' statement that "the whole field of testing and measurement, appraisal and 'evaluation' in education is so young, in fact, that the teacher may expect to find a good deal of confusion, disagreement, and dogmatic opinion in it as in any new area" (546).

The final four chapters of the book, by Dr. Challman, are given to a well illustrated survey of child needs, conditions productive of thwarting, and resulting nonadaptive or maladaptive behaviors. The treatment of mental health hazards of the school child is chiefly discursive, containing some testimonial and experimental evidence of the extent and potency of the hazards named. The discussions of specific techniques and methods in child guidance, such as the case study, projective methods, personality and interest inventories, the interview, and observational methods are rather brief to be informative. The chapter on the mental health of the teacher, which discusses difficulties inherent in the profession, occupational insecurity and other sources of frustration, and the specific kinds of maladjustments faced by teachers, is reasonably new to educational psychology texts.

In general, the text attempts a wider content in rather less conventional style than earlier editions. It may be that it covers too much ground in too condensed fashion to furnish the best illustration of the conditions favorable to learning stressed by the authors. Thus they feel that to be learned effectively, material must be meaningful; to be meaningful, material must be experienced in a variety of relationships and contexts in order that the learner may achieve generalizations out of his active contacts with the material against the variety of backgrounds. But their text is inclined toward summarization, generalizations, and statements of conclusions and implications, with relatively less emphasis on the exposition of specific items of information, facts, and charts and tables containing basic data. It probably will be most useful to instructors wishing to acquaint students with the scope of the field included in present-day educational psychology.

DALE B. HARRIS.

*University of Minnesota.*

MUENZINGER, K. F. *Psychology: the science of behavior*. New York: Harper, 1942. Pp. xi + 441.

Among the many textbooks of psychology, Muenzinger's takes its place with the few—such as those of Titchener, Watson, Hollingworth, and Wheeler—which adhere consistently to a single theoretical standpoint. Indeed, the author makes this feature his excuse for adding one more text. Since his formulation is both original and a product of modern psychology, it is in itself a sufficient justification. "This book should be judged," he states in his preface, "as an attempt at a systematization of psychology no less than as a textbook." I shall take the author at his word and consider the book first as a system and secondly as a text.

By systematization Muenzinger means, as he states in an appendix, not a structure of postulates and theorems, but a method of description. There is probably no sharp distinction here, since the adoption of a conceptual framework is an essential step in logical procedure and determines the form which deductions must take. Concerning the character of Muenzinger's theoretical approach, psychologists will want to know two things: First, how does he handle the relation between subjective and objective data? Secondly, what for him are the psychologist's elements, the end-products of analysis?

With respect to the first problem, the author draws a clear-cut distinction between objective processes, which can be observed by another, and subjective processes, which can be observed by the subject alone. Only the former are suitable for direct scientific description. The latter can be dealt with only indirectly, either through the subject's verbal report or through a study of the conditions under which the subjective qualities occur. Readers who, for example, recall Pratt's lucid discussion may take exception to the author's frankly dualistic position in this respect. Is not all scientific description based, in the last analysis, on immediate experience? And is it not all at least one step removed from that experience?

With respect to the second problem, Muenzinger characterizes his own



view-point as a simplification of field theory. He achieves this simplification by means of two devices: a unit of description and a frame of reference. The unit he has chosen is a segment of behavior progressing in a constant direction from starting-phase to end-phase, the S-E cycle. Behavior is considered to be made up primarily (though not exclusively) of such cycles. The frame of reference with respect to which these units are to be described consists of four categories: (1) motivation, i.e., those factors determining the direction and strength of behavior; (2) discrimination, the analysis and organization of the situation; (3) performance, which modifies the situation in the direction of the end-phase; and (4) affectivity, the effect on the subject of changes in the dynamic stresses of the situation. The result of this organization is more than a fresh approach to the time-honored topics of general psychology. The author's illuminating discussion of certain of these topics gives abundant evidence that his choice of descriptive concepts is a happy one.

A few points of special interest growing out of the present system may be mentioned. One is that processes may be distinguished in terms of whether or not they constitute S-E cycles of behavior. On this basis the author makes the distinction between task and movement, so important for the problem of response equivalence in learning. By the same criterion he differentiates reflexes from both voluntary and automatic behavior. Many conditioned responses, in contrast with conditioned reflexes, he considers true S-E units and presents evidence to prove it. More arbitrary but also useful is his distinction between *feeling* as an immediate consequence of sensory stimulation and *emotion* as a function of the subject's progress toward a goal.

A second point of interest is Muenzinger's treatment of learning, of which different aspects appear under each of the four categories, to be summarized in a convenient appendix. All learning, for the author, consists of varying amounts of two processes: (1) the reorganization of the situation, a matter of discrimination; and (2) the increase of efficiency, a matter of performance. Repetition, which is essential to the second process, is not essential to the first. But associationists will be relieved to find that the dichotomy is not complete. Repetitions are needed sometimes (e.g., by a rat in a discrimination box) "in order to fixate the new meanings (131)." One wonders whether, after all, the function of repetition is essentially different in the two processes.

A third point of interest is the author's novel treatment of perception and meaning as related to psychological movement toward an end-phase. A fourth is his attempt to differentiate specific emotions by analyzing the dynamic factors involved, an attempt which is the more stimulating since most psychologists abandoned the effort when physiological methods failed. In general, whether one agrees or disagrees with him, Muenzinger provides his colleagues with new food for thought on old topics.

As a text in general psychology the book has two possible hurdles to surmount; the theoretical bias of the instructor and his attitude toward the purpose of the first course. Concerning the latter question Muenzinger states his views explicitly in the preface. His aim is "to present scientific psychology in a professional manner to college students." He



makes no compromise with the recent trend toward popularizing psychology. Students should not be bribed nor denied what may be their one contact with psychology as a science. As with other sciences, whether the student enjoys his contact is and should be an individual matter. Obviously this book will appeal to the tougher-minded teachers of psychology. But tough and tender, instructor and student alike, its users can find reassurance in the knowledge that they are dealing with the genuine article.

Since the subject-matter is treated as an integrated whole rather than a series of separate topics, its organization is important. The book is divided into three parts. In Part I, called *The dynamics of behavior*, the author builds his theoretical structure. Part II, dealing with psychophysiology, contains much that is conventionally treated under the topics of motivation, emotion, sensation, perception, action, and the nervous system, but arranged in accordance with Muenzinger's framework. Part III takes up individual differences and social relationships. It contains a chapter on mental hygiene which is not just another list of defense mechanisms, and a discussion of propaganda which is both timely and incisive. The true gist of the book, however, is contained in Part I.

From the teacher's standpoint, and probably from the student's as well, clarity of organization is the text's outstanding virtue. At the beginning of each chapter its contents are put in relation to what has preceded it. Topics and subtopics are plainly identified by a decimal system of numbering. On the other hand, clarity of outline is achieved at the expense of fullness of treatment. The author's succinctness tends to leave the reader with his appetite whetted but unsatisfied. There is a danger here that *too* bare a handling may fail to stimulate any appetite at all. Some writers pad their discussions *ad nauseam*; Muenzinger barely covers the bones. This lack of sheer bulk makes supplementary reading a necessity.

In conclusion I can do no better than to quote once more from the preface: "This is not a handbook of, but an introduction to, the science of behavior. It is the ground plan, the theoretical framework, which must be clearly traced so that the facts of behavior can be placed in proper relation to each other."

JOHN P. SEWARD.

*Connecticut College.*

WALTON, A. *The Fundamentals of industrial psychology*. New York: McGraw-Hill, 1941. Pp. xiii + 231.

This book was prepared primarily for use as a text in connection with foreman training classes in industrial plants. Its simple, non-technical, and somewhat abbreviated style indicate that it is intended for laymen and to be supplemented by lectures and discussions. The conservative psychologist may feel that more adequate explanation with proper reservations would make it a more scientific treatment. This discussion of the essential topics, however, is dependable, and is written by an author who has had extensive training and experience both as an engineer and as a psychologist.

Many of the sixteen chapters might be considered under larger headings, although the interrelationships are not always pointed out by the author. Chapter II, Human Habits, develops a theme that appears in Chapter VI, The Basis of Personality, and Chapter VII, Resistance to Change. This theme is epitomized in the statement: "The personality, then, is the sum total of these habits one has accumulated in the three systems of his being—the muscular, the emotional and the verbal or reasoning mechanisms."

Aptitudes (unlearned) and Abilities (learned) and their measurement (tests) are treated in three chapters. There is no attempt to give techniques but rather understanding to the foreman so that he can appreciate what the industrial psychologist is trying to do.

Efficiency Methods and Scientific Management (Chapter VIII) and Fatigue, Monotony, and Accidents (Chapter XIII) receive briefer discussion, but more similar to that found in other textbooks. As it is described, "psychological fatigue" is evidently meant to be identical with "monotony," although that association is not clearly stated. The chapter on training in industry could also be included here as receiving more conventional treatment.

Motivation, although that psychological term is never used, receives as much attention as any topic. It is discussed under Psychological Factors Enhancing Efficiency, When the Human Machine Gets Out of Adjustment, and Attitude Building. The psychologist may feel that these concepts developed here are most effectively presented to the foreman or other layman reader.

This little book is made interesting by the introduction of factual material and even of opinions that are not psychological. Bits of history, such as the work of Leonardo da Vinci as a time and motion study efficiency engineer, a little social and economic theory on labor relations, and some advice to emulate Ben Franklin can not be deduced from evidence found by any psychologist in a laboratory. The author has taken the risk of offending professional colleagues in order to carry a message to the layman foreman and supervisor. Doubtless it does that, and it will be effective, particularly if it can be accompanied by lectures and discussions, or followed by more advanced technical reading.

BRUCE V. MOORE.

*The Pennsylvania State College.*

WATSON, GOODWIN (Ed.). Civilian morale. Second yearbook of the Society for the Psychological Study of Social Issues. Boston: Houghton Mifflin Co., 1942. Pp. xii + 463.

This is a symposium on democratic morale, its peculiarities as contrasted with autocratic morale, methods of its development, its points of stress and strain, its measurement. The contributors are G. W. Allport, T. M. French, Kurt Lewin, Gregory Bateson, Lois Barclay Murphy, Ronald Lippitt, Alex Bavelas, S. S. Sargent, Theodore Newcomb, Donald Rugg, Joe and Eugenia Belden, Otto Klineberg, Kenneth B. Clark, J. D. Ketchum, J. S. A. Bois, Richard L. Hull, Arthur Kolstad, Goodwin Wat-

son and Gardner Murphy. Besides being editor, Goodwin Watson contributes three articles: "Five Factors in Morale," "Morale During Unemployment" and "Labor Unions and Morale." Two articles: "Children Are Important to Morale" by Lois Barclay Murphy and "Morale Among Negroes" by Kenneth B. Clark evidence a spirited conviction as to what's wrong with democratic morale and as to what is to be done about it. In the concluding chapter Gardner Murphy points out the essentials for a civilian morale program in American democracy.

This war, unlike previous wars, involves the total population military and civilian of the belligerents. In fact the civilian population is so much more heavily involved than in former wars that it has become the very target of physical and psychological attack by the enemy. More than ever before the entire civilian population from the very beginning needs to feel the direct sacrifice of its peace-time satisfactions and privileges and to share in the common cause by way of safety-measures, salvaging of waste-materials, occupational readjustment, bond-buying, heavy war-taxes, war-production and an invulnerable spirit. The center of gravity in psychological warfare has accordingly shifted from military to civilian morale: the supreme objective of the enemy is that of breaking down the civilian morale of the opponent while energetically bolstering its own civilian morale.

The building of civilian morale in democratic countries accustomed to a *laissez-faire* policy is much more difficult than building morale in autocratic countries where the chief end of man from childhood on is the subordination of self to the State and where ruthless means are used to make individuals fit the Procrustean bed of the State.

The present work keenly appreciates this fact and labors to find ways and means of enhancing democratic morale without downright subscription to autocratic methods. It is duly recognized that democratic morale, once the nation has attained a certain complexity, lies somewhere in the middle of the road between *laissez-faire* and autocracy, between Jeffersonian and Hamiltonian policies. In every event, it is imperative that democratic morale retain the following pristine features: voluntary, wholehearted participation, reverence for the individual human personality, equal rights without regard to race, nationality, color or creed, economic self-respect and social status for all individuals, majority rule, representative and evocative leadership, tolerance, freedom of speech, recognition of the whole man, war never an end in itself, voluntary co-ordination of effort.

With individuals and groups long accustomed to do much as they please, unanimity in the democratic nation as a whole becomes a problem of great magnitude. Segregation, oppression, non-recognition of minority-groups, intra-group disharmonies, sectionalism, interdenominational strife, conflict between labor and capital, exploitation, haphazardness in child-guidance, tainted politics, the democratic masquerading of autocratic leadership in high and low places are cited as lines of cleavage in democratic civilian morale. It is freely admitted that national unanimity cannot be secured by the ballyhoo methods of the first World War because people are better educated, primary group controls have conspicu-

ously weakened, the efficacy of propaganda has been destroyed by advertisers, pacifism has gained considerable foothold, and the apathy of the individual in the matter of accepting responsibility has increased. The picture of morale in Canada and in the United States at the time that this book was written evidenced much indifference, passivity and internal conflict. It should be noted, however, that much of the content was written before Pearl Harbor.

Remedial measures more or less of a long range-character are suggested for heightening democratic civilian morale. It is proposed in the light of experiments that prospective leaders, especially those in face-to-face relations, be trained in democratic leadership. Every medium of propaganda and education—moving pictures, radio, newspapers, magazines—should build favorable attitudes toward the laborer and the Negro. There is needed formulation of a goal in this war which will be not only dynamogenic but unifying to all elements of the democracy. Each individual should have a specified task at which he may feel himself more actively contributing to the winning of the war. A nation-wide centralized child-care program along with general schooling in democratic philosophy and practice would insure the future mental and physical health of the nation. Finally it is strongly suggested that a permanent unified non-political national morale research committee be established to act as a clearing house for all proposals and endeavors which have to do with the public welfare.

Not only are there special difficulties in the way of building democratic civilian morale, there are also difficulties in the way to unanimity among psychologists as to the meaning of the term *morale*. Morale is a term which is to be defined otherwise than in a strictly logical fashion. It may be described or its conditions or functions may be cited such as physical and mental health, a reasonable measure of life-satisfaction, control of fear, extroversion, integration, hope, confidence, equanimity, perseverance, comradeship, singlemindedness, unanimity, teamwork, organization, efficiency, positive attitudes. In the present work morale is more often regarded as attitude. With favorable or positive attitudes the morale is considered as high, with negative attitudes the morale is regarded as low. Kurt Lewin thinks that hope or aspiration best typifies morale; Goodwin Watson believes that life-satisfaction best does it. In the reviewer's opinion confidence appears the most conspicuous facet of morale although the other facets can not be overlooked. When the confidence of the individual or of the group is low, the morale of the individual or group is necessarily low. Gordon W. Allport would give a many sided description of national morale as "(a) the healthful state of the convictions and values in the individual citizen that endows him with abundant energy and confidence in facing the future; (b) his decisive, self-disciplined effort to achieve specific objectives that derive from his personal convictions and values; and (c) the agreement among citizens (especially in times of crisis) in respect to their convictions and values and the co-ordination of their efforts in attaining necessary objectives."

Efforts to measure civilian morale limit themselves at present to the measurement of some one facet of morale Lewin would measure aspira-

tion, Watson's life-satisfaction, Hull and Kolstad's attitude of worker toward his job and his company, Joe and Eugenia Belden's attitudes of college students toward war involving the U. S., Donald Rugg's public opinion. American morale as measured in terms of attitude or opinion was overwhelmingly sympathetic toward the Allies even before America entered the war.

Two factors influence morale in the sense of attitude according to S. S. Sargent: 1. environmental changes themselves and 2. other people's interpretations of the environment. The latter influence is called propaganda. Propaganda, a second phase of psychological warfare, is closely linked with morale. It aims to build morale at home by shaping attitudes while it seeks to demoralize the enemy. To be effective propaganda must have as its starting point an accurate acquaintance with the attitudes already existing or capable of existing among the people in question.

As a whole the book, despite the haste with which it was brought together, its wordy and desultory character, its lack of uniform merit, gives much food for thought about the state of the nation on the eve of entering upon its greatest war. Certain of its suggestions merit a try-out in the present crisis.

On the other hand, the book falls somewhat short of expectations as a thoroughgoing down-to-earth psychological attack upon concrete morale problems. With scattered exceptions it is more concerned with an overall philosophy of democratic morale rather than with the ways and means for smoothing out the psychological snags in the war effort such as are looming up every day. For example nothing is said with respect to the means of counteracting the demoralizing effects to the citizenry of announcements and counter-announcements presumably emanating from the Government as to taxes, rationing, drafting of married men. Nothing is suggested with respect to vocational readjustment of war-workers or with respect to morale-problems of civilian defense. Much of this inadequacy of the book may, however, be excused on the score that it was written in the main before Pearl Harbor. Things have happened so swiftly since its writing that it would be fairer to say that the book was almost out of date before its publication save for its reinterpretations of the democratic creed.

F. C. SUMNER.

*Howard University.*



### BOOKS AND MATERIALS RECEIVED

BORNSTEIN, J., & MILTON, J. Action against the enemy's mind. Indianapolis: Bobbs Merrill, 1942. Pp. xxi+294.

CLARKE, F. P., & NAHM, M. C. Philosophical essays in honor of Edgar Arthur Singer, Jr. Philadelphia: Univ. Pennsylvania Press, 1942. Pp. x+377.

COWDRY, E. V. (Ed.) Problems of ageing. (2nd Ed.) Baltimore: Williams and Wilkins, 1942. Pp. xxxvi+936.

INBAU, F. E. Lie detection and criminal interrogation. Baltimore: Williams and Wilkins, 1942. Pp. vii+142.

STONE, C. A., & GEORGE, J. S. Work units in educational statistics. New York: Harper, 1942. Pp. v+154.

## NOTES AND NEWS

RUDOLF PINTNER, professor of education at Teachers College, Columbia University since 1921, succumbed to a heart attack, November 7, at the age of fifty-seven years. Dr. Pintner, who was born in Lytham, England, came to the United States in 1912. He was professor of psychology (1912-13) at the University of Toledo and instructor (1913-14), assistant professor (1914-17), and professor of psychology (1917-21) at Ohio State University. DR. PINTNER had served for many years as Associate Editor of the *Psychological Bulletin*.

Dr. H. J. PETERSON, professor and head of the department of psychology at Mississippi Southern College (Hattiesburg) succumbed to a heart attack May 22, 1942.

In accordance with the vote of the American Psychological Association, September 3, 1942, "that a committee on the curriculum in psychology for the preparation of students for war service be created to cooperate with the Committee on College Curriculum Adjustments of the U. S. Office of Education Wartime Commission," the President of the American Psychological Association has appointed the following committee: HENRY E. GARRETT, *Chairman*, HORACE B. ENGLISH, EDNA HEIDBREDER, ERNEST HILGARD, B. V. MOORE, LOUISE OMWAKE, and DAEL WOLFLE.

The program of Laity Lectures for the coming session at the New Work Academy of Medicine includes a lecture entitled *Growing Up Normally* by DR. MYRTLE MCGRAW, to be given on March 25, 1943.

The honorary degree of doctor of letters was conferred by Colgate University on September 24, 1942, upon DR. GEORGE D. STODDARD, Commissioner of Education of the State of New York.

WALTER S. WATSON, director of admissions and student relations at Cooper Union, New York City, has been promoted to an associate professorship of psychology.

CHARLES E. MEYERS, has been appointed to the department of psychology of the University of Denver.

ROBERT P. HINSHAW, of Princeton University, has been appointed assistant professor of psychology at Kenyon College (Gambier, Ohio, replacing SAMUEL CUMMINGS, who is in the Navy.

JOHN W. M. ROTHNEY, assistant professor of education, University of Wisconsin, has been granted leave of absence to serve in the psychological division of the Air Force.

DR. DOROTHY BIRD NYSWANDER, of the New York City Department of Health, has been named regional supervisor of War Public Service Projects of the Federal Works Agency.

HENRY T. TYLER, professor of psychology, Sacramento Junior College, has been named vice-president of the college.

THOMAS W. REESE, has been appointed to the staff of Mount Holyoke College as assistant professor of psychology and education.

A. STERL ARTLEY, for the past two years assistant in the Reading Clinic, the Pennsylvania State College, has been appointed instructor in psychology, Stephens College, Columbia, Mo.

KINSLEY R. SMITH, assistant professor of psychology, Pennsylvania State College, has received a leave of absence to do psychological research for the United States Navy.

The William James lectures at Harvard University for the year 1942-43 will be given by EDWARD LEE THORNDIKE, under the general title "*Human Nature and Human Institutions.*" Following are the topics of the lectures: (1) The original nature of man: the genes of the mind, (2) Modification by the environment: learning, (3) Human relations, (4) The psychology of language, (5) The psychology of language: the origin of language, (6) The psychology of government: rulers and ruled, (7) The psychology of government: laws and the law, (8) The psychology of punishment, (9) The psychology of welfare: the welfare of individuals, (10) The psychology of welfare: the welfare of communities.

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